```
Sequence 1549197, Application US/
Publication No. US20050246794A1
GENERAL INFORMATION:
APPLICANT: Dharmacon, Inc.
APPLICANT: Khvorova, Anastasia
APPLICANT: Reynolds, Angela
APPLICANT: Leake, Devin
APPLICANT: Marshall, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0% / Maximum Match 100% Listing first 12 summaries
                                                                                                                                                                                                                                 US-11-101-244-1549197
                                                                                                                                                                                                                                                    RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic -
                                              APPLICANT: Leake, Devin
APPLICANT: Marshall, William
APPLICANT: Scaringe, Stephen
TITLE OF INVENTION: Functional and Hyperfunctional sirNA
FILE REFERENCE: 13499US
             CURRENT APPLICATION NUMBER: US/11/101,244
CURRENT FILING DATE: 2005-04-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
PRIOR APPLICATION NUMBER: 60/502,050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113.
                                                                                                                                                                                                                                                                                                                                                                                                  $$ $$ $$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic search, using sw model
                                                                                                                                              Khvorova, Anastasia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTITY NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-904-968A-19-COPY
19
                                                                                                                                                                                                                                                                                                                                                    72.6
69.5
89.5
447.4
447.4
444.2
1.1
1.1
1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12 seqs, 161 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pubnewdb19:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ggtcgcgctgtggcgaagg 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.8
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                 Application US/11101244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9, 2006, 15:53:00; Search time 0.001 Seconds (without alignments) 6.118 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멂
                                                                                                                                                                                                                                                                                                                                                                               US-11-101-244-1549197
US-11-083-784-1549197
US-10-310-914A-311309
US-10-319-924A-15139
US-11-103-122-25
US-11-103-122-29
US-11-103-122-29
US-11-158-209-198
US-11-158-209-198
US-11-158-209-829
US-11-158-209-829
US-11-158-209-829
US-11-158-209-829
US-11-158-209-829
US-11-993-514-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                    US-11-158-209-494
US-11-158-209-1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Published Applications. NA, New "RESULT 2" 1549-1549197
                                                                                                                                                                                                                                                                                                                                           Sequence 1549197,
Sequence 3113097,
Sequence 311309, A
Sequence 25, Appl
Sequence 29, Appl
Sequence 198, App
Sequence 473, App
Sequence 36, Appl
Sequence 36, Appl
Sequence 36, Appl
Sequence 474, App
Sequence 494, App
Sequence 1172, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                            RESULT 3
US-10-310-914A-311309
                                                                                                                                                                                                                                                                                よ
                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
```

ი

000

```
; SEQ ID NO 1549197
; LENGTH: 19
; TYPE: RNA
; ORGANISM: Homo sapiens
US-11-083-784-1549197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LENGTH: 19
; TYPE: RNA
; ORGANISM: Homo sapiens
US-11-101-244-1549197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US/10/714,333
PRIOR FILING DATE: 2003-11-14
PRIOR APPLICATION NUMBER: 60/502,050
PRIOR FILING DATE: 2003-09-10
PRIOR APPLICATION NUMBER: 60/426,137
PRIOR FILING DATE: 2002-11-14
NUMBER OF SEQ ID NOS: 1591911
SOFTWARE: Proprietary
                                                                                                                                                                                                        Sequence 311309, Application US/10310914A Publication No. US20060003322A1 GENERAL INFORMATION:
APPLICANT: Bentwich, Isaac
APPLICANT: Shiler, Kvuzat
TITLE OF INVENTION: Bioinformatically detectable group of novel regulatory genes and
TITLE OF INVENTION: uses thereof
TILE OF INVENTION: uses thereof
TILE REFERENCE: 06087.0200.CPUS01
CURRENT APPLICATION NUMBER: US/10/310,914A
CURRENT TILING DATE: 2002-12-06
NUMBER OF SEQ ID NOS: 1388402
SOFTWARE: PatentIn version 3.3
SEQ ID NO 311309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Proprietary
SEQ ID NO 1549197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 2003-09-10
PRIOR APPLICATION NUMBER: 60/426,
PRIOR FILING DATE: 2002-11-14
NUMBER OF SEQ ID NOS: 1591911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/11/083,784
CURRENT FILING DATE: 2005-03-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Marshall, William
APPLICANT: Scaringe, Stephen
TITLE OF INVENTION: Functional and Hyperfunctional sirNA
FILE REFERENCE: 13499US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Dharmacon, APPLICANT: Khvorova,
                                                                                                                                                                                                                                                                                                                                              1 GGTCGCGCTGTGGCGAA 17
. ||: | ||:|:|||||
2 GGUGGAGCUGUGGCGAA 18
                                                                                                                                                                                                                                                                                                                                                                                                                    cn 72.6%;
l Similarity 70.6%;
l2; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGTCGCGCTGTGGCGAA 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGUGGAGCUGUGGCGAA 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Khvorova, Anastasia
Reynolds, Angela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Leake, Devin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7, Application US/11083784
US20050245475A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     72.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                            u
''
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 13.8;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 13.8; D
Pred. No. 1.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              , 137
                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19;
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
; TYPE: RNA; ORGANISM: Human
US-10-310-914A-311309
                                                                                                                                                                                                                                                                                                                                                                                                                    US-11-103-122-25/c
Sequence 25, Application US/11103122
Publication No. US20050282190A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           占
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-939-294A-15139/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-939-294A-15139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Turner, Daniel
APPLICANT: Pingle, Maneesh
APPLICATION: Methods for identifying target nucleic acid molecules
FILE REFERENCE: 19603/4121 (CRF D-2995-02)
CURRENT APPLICATION NUMBER: US/10/939,294A
CURRENT FILING DATE: 2004-09-10
PRIOR APPLICATION NUMBER: US 60/502/731
PRIOR APPLICATION NUMBER: US 60/502/731
PRIOR FILING DATE: 2003-09-12
NUMBER OF SEQ ID NOS: 3895
SOFTWARE: PatentIn version 3.3
SEQ ID NO 15139
                                                                                                                         APPLICANT: Shi, Hua
APPLICANT: Lis, John T.
APPLICATION: MODULAR DESIGN AND CONSTRUCTION OF NUCLEIC ACID CONSTRUCTIOLS OF INVENTION: MOLECULES, APTAMER-DERIVED NUCLEIC ACID CONSTRUCTIOLS OF INVENTION AND METHODS OF USE
FILE REFERENCE: 19603/4491
CURRENT APPLICATION NUMBER: US/11/103,122
CURRENT FILING DATE: 2005-04-11
PRIOR APPLICATION NUMBER: 60/560,895
PRIOR FILING DATE: 2004-04-09
NUMBER OF SEQ ID NOS: 50
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 15139, Application US/10939294A Publication No. US20050266417A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Barany, Francis
APPLICANT: Turner, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Artificial
OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: element N3
                                                            ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: oligonucleotide probe
                                               FEATURE:
                                                                                          TYPE: RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                            ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGTCGCGCTGTGGCGAAG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTCGCGAAGCGGCGA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTCGCGCTGTGGCGA 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCCGGGCUGUGGAGAAG 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58.9%;
ilarity 81.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 11.2; D
Pred. No. 2.7;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 13.2;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                        functional
                                                                                                                                                                                                                                                                                                                                  CONSTRUCTS, RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
```

```
SOFTWARE: PatentIn Ver. 2.1

SEQ ID NO 29

LENGTH: 12

TYPE: RNA

ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: functional
OTHER INFORMATION: element N3

US-11-103-122-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
; LENGTH: 11
; TYPE: DNA
; ORGANISM: Homo Sapiens
US-11-158-209-198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-11-158-209-198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-11-103-122-29/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 29, Application US/11103122
Publication No. US20050282190A1
                                                                                                                                                             SOFTWARE: SeqWin99, version 1.02 SEQ ID NO 198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 198, Application US/11158209
Publication No. US20060088852A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Shi, Hua
APPLICANT: Lis, John T.
APPLICANT: Lis, John T.
APPLICANT: Lis, John T.
APPLICANT: Lis, John T.
ITILE OF INVENTION: MODULAR DESIGN AND CONSTRUCTION OF NUCLEIC ACID
TITLE OF INVENTION: MOLECULES, APTAMER-DERIVED NUCLEIC ACID CONSTRUCTS,
TITLE OF INVENTION: SCAPFOLDS, THEIR EXPRESSION, AND METHODS OF USE
FILE REPERENCE: 19603/4491
CURRENT APPLICATION NUMBER: US/11/103,122
CURRENT FILING DATE: 2005-04-11
PRIOR APPLICATION NUMBER: 60/560,895
PRIOR FILING DATE: 2004-04-09
NUMBER OF SEQ ID NOS: 50
CONTRADED: DESCRIPTION OF 201
                                                                                                                                                                                                                                     TITLE OF INVENTION: Method for Determining the Homeostasis of Hairy Skin FILE REFERENCE: H 05667 PCT CURRENT APPLICATION NUMBER: US/11/158,209 CURRENT FILLING DATE: 2005-06-20 PRIOR APPLICATION NUMBER: PCT/EP2003/014070 PRIOR FILING DATE: 2003-12-11 PRIOR FILING DATE: 2003-12-10 PRIOR FILING DATE: 2003-12-20 PRIOR FILING DATE: 2003-12-20 PRIOR FILING DATE: 2003-12-20 PRIOR FILING DATE: 2003-12-20 PRIOR PILING DATE: 2003-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Dirk Petersohn APPLICANT: Kordula Schlotmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9 CGCTGTGGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 CGCTGTGGC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9 CGCTGTGGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 CGCTGTGGC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kay Hofmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Olaf Holtkotter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Marcus Conradt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Thomas Gassenmeier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47.4%; Score 9; DB 1;
100.0%; Pred. No. 4.3;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47.4%; Score 9; DB 1; 100.0%; Pred. No. 4.3; tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

Query Match

44.2%;

Score 8.4;

DB

Length 11;

90.0%;

A CACHERGES

```
; TYPE: DNA
; ORGANISM: Homo Sapiens
US-11-158-209-829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TYPE: DNA
; ORGANISM: Homo Sapiens
US-11-158-209-473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
US-11-158-209-473/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: PCT/EP2003/014070
PRIOR FILING DATE: 2003-12-11
PRIOR APPLICATION NUMBER: 102 60 931.4-41
PRIOR FILING DATE: 2002-12-20
NUMBER OF SEQ ID NOS: 1335
SOFTWARE: SegWin99, version 1.02
SEQ ID NO 473
   Query Match
Best Local Similarity
                                                                                                                    SOFTWARE: SegWin99, version 1.02
SEQ ID NO 829
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 829, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 90.4 Matches 9; Conservative
                                                                                                                                                    CURRENT APPLICATION NUMBER: US/11/158,209
CURRENT FILING DATE: 2005-66-20
PRIOR APPLICATION NUMBER: PCT/EP2003/014070
PRIOR FILING DATE: 2003-12-11
PRIOR PLICATION NUMBER: 102 60 931.4-41
PRIOR APPLICATION NUMBER: 102 60 931.4-41
PRIOR FILING DATE: 2002-12-20
NUMBER OF SEO ID NOS: 1335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-158-209-829
                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Method for Determining the Homeostasis of Hairy Skin FILE REFERENCE: H 05667 PCT
                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Dirk Petersohn
APPLICANT: Kordula Schlotmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Method for Determining the Homeostasis of Hairy Skin FILE REFERENCE: H 05667 PCT CURRENT APPLICATION NUMBER: US/11/158,209 CURRENT FILING DATE: 2005-06-20
                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Dirk Petersohn
APPLICANT: Kordula Schlotmann
                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                    ENGTH: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 11
                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10 GGCCCCCTG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGTCGCGCTG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9;
                                                                                                                                                                                                                                                                                                         Marcus Conradt
Kay Hofmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTGGCAAAG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTGGCGAAG 18
                                                                                                                                                                                                                                                                                                                                             Olaf Holtkotter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Thomas Gassenmeier
                                                                                                                                                                                                                                                                                                                                                            Thomas Gassenmeier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kay Hofmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Olaf Holtkotter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Marcus Conradt
                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/11158209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/11158209
b. US20060088852A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                               US20060088852A1
   90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44.2%;
90.0%;
   Score 8.4;
Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 8.4;
Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 4.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
. 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 11;
                 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1,
               Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
```

```
APPLICANT: Kay Hofmann
ITILE OF INVENTION: Method for Determining the
FILE REFERENCE: H 05667 PCT
CURRENT APPLICATION NUMBER: US/11/158,209
CURRENT FILING DATE: 2005-06-20
PRIOR APPLICATION NUMBER: PCT/EP2003/014070
PRIOR FILING DATE: 2003-12-11
PRIOR FILING DATE: 2003-12-11
PRIOR FILING DATE: 2003-12-10
PRIOR APPLICATION NUMBER: H02 60 931.4-41
PRIOR FILING DATE: 2002-12-20
NUMBER OF SEQ ID NOS: 1335
SOPTWARE: SeqWin99, version 1.02
SEQ ID NO 494
LEEGTH: 11
TWINDLESS OF NAME
LEEGTH: 11
                                                                                                                                                                                                                                                                                                                                                                                                                         US-11-158-209-494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Reverse Primer Extension Oligo for Detecting Alleles at PSs ; OTHER INFORMATION: Haplotypes Comprising Preferred Embodiments of Progression ; OTHER INFORMATION: Markers I and Progression Markers II US-10-993-514-36
                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
US-10-993-514-36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                  Publication No. US20060088852A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn version 3.3 SEQ ID NO 36 LENGTH: 10 TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 494,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 36, Ap
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                       APPLICANT: Dirk Petersohn APPLICANT: Kordula Schlot APPLICANT: Thomas Gassenr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/10/993,514
CURRENT FILING DATE: 2004-11-22
PRIOR APPLICATION NUMBER: US 60/524,467
PRIOR FILING DATE: 2003-11-24
NUMBER OF SEQ ID NOS: 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: APOA4 Genetic Markers Associated with Progression of Alzheimer's TITLE OF INVENTION: Disease FILE REFERENCE: 2300.0880001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Aerssens, Jeroen APPLICANT: Athanasiou, Mar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCGCTGTG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cohen, Nadine
Dain, Bradley
Denton, R. Rex
Judson, Richard S.
Ozdemir, Vural
Reed, Carol R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ecectere 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGCTGTGGC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGCTGTGGC 11
                                                                                                                                                                                                                                                                                     Thomas Gassenmeier
Olaf Holtkotter
                                                                                                                                                                                                                                                                                                                       Kordula Schlotmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Brain,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Athanasiou, Maria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10993514
lo. US20050250122A1
                                                                                                                                                                                                                                                                                                                                                                                                   Application US/11158209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carlos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42.1%; Score 8;
100.0%; Pred. No.
Live 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ). DB 1;
                                                                                                                                                                                                                            the Homeostasis of Hairy Skin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
```

```
US-11-158-209-1172

US-11-158-209-1172

Sequence 1172, Application US/11158209

Publication No. US20060088852A1

GENERAL INFORMATION:
APPLICANT: Dirk Petersohn

APPLICANT: Thomas Gassenmeier
APPLICANT: Thomas Gassenmeier
APPLICANT: Marcus Conradt

APPLICANT: Marcus Conradt

APPLICANT: May Hofmann

TITLE OF INVENTION UNMEER: US/11/158,209

CURRENT APPLICATION NUMBER: US/11/158,209

CURRENT FILING DATE: 2005-06-20

PRIOR APPLICATION NUMBER: US/11/158,209

CURRENT FILING DATE: 2005-12-11

PRIOR APPLICATION NUMBER: US/11/158,209

CURRENT SEQUING DATE: 2003-12-11

PRIOR APPLICATION NUMBER: US/11/158,209

CURRENT SEQUING DATE: 2002-12-20

NUMBER OF SEQ ID NOS: 1335

SOFTWARE: SeqWing9, version 1.02

LENGTH: 11

TYPE: DNA

ORGANISM: Homo Sapiens

US-11-158-209-1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Homo Sapiens
US-11-158-209-494
Search completed: May 9, 2006, 15:53:00 Job time: 0.001 secs
                                                                                  뭥
                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                           Query Match 41.1%; Score 7.8; DB Best Local Similarity 81.8%; Pred. No. 6; Matches 9; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 41.1%;
Best Local Similarity 81.8%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 TGTGGGGAAAG 11
                                                                                                          5 GCGCTGTGGCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9 TGTGGCGAAGG 19
                                                                                  1 GGGCTGTGGAG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 7.8; DB 1; Length 11; Pred. No. 6; 0; Mismatches 2; Indels
                                                                                                                                                                                                         DB 1; Length 11;
                                                                                                                                                                2; Indels
                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                0;
```

```
GenCore version 5.1.8
Copyright (c) 1993 - 2006 Biocceleration Ltd.
```

OM nucleic - nucleic search, using sw model

9, 2006, 16:40:51 ; Search time 0.001 Seconds (without alignments) 1.024 Million cell updates/sec May Run on:

US-09-904-968A-20-COPY 16 Perfect score:

1 cggcgggcggcatcgt 16 Sequence:

IDENTITY NUC Gapop 10.0 , Gapext 0.5 Scoring table:

3 segs, 32 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 3 summaries

estdb20:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	ACCESSION: AJ ACCESSION: AJ ACCESSION: AJ
ΩI	
8	
Query Match Length DB	12 10 10
Query Match	8.4 52.5 7 43.8 7 43.8
ult No. Score	8.4
Result No.	357

ALIGNMENTS

AJ587934 11-JAN-2004 AZ587934 T-DNA flanking sequence, left border, clone Brunaud, V., Balzergue, S., Dubreucq, B., Aubourg, S., Samson, F., Chavin, S., Bechlerld, N., Cruaud, C., DeRose, R., Pelletier, G., Lepiniec, L., Caboche, M. and Lecharny, A.

T_DNA integration into the Arabidopais genome depends on sequences Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, eudicotyledons, core eudicotyledons, rosids, eurosids II, Brassicales, Brassicaceae, Arabidopsis. 2 (bases 1 to 12)
Balzergue, S.
Direct Submission
Submitted (23-OCT-2003) Balzergue S., UMRGV, INRA/CNRS, 2 rue AJ587934.1 GI:37937558 GSS; left border; T-DNA flanking sequence. Arabidopsis thaliana (thale cress) Arabidopsis thaliana of pre-insertion sites EMBO Rep. 3 (12), 1152-1157 (2002) genomic survey sequence. 342D03, g AJ587934 12446565 RESULT 1 AJ587934 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM PUBMED REFERENCE AUTHORS TITLE JOURNAL REFERENCE AUTHORS JOURNAL TITLE

Gaston Cremieux, 91057 Evry cedex, FRANCE
PCR was performed on DNA from transformants of Arabidopsis thaliana plants from INRA (versailles). The DNA fragment (s) resulting from the PCR were directly sequenced from the left or the right border to determine the genomic sequence flanking the insertion. T-DNA derived sequences were removed. Information to order the corresponding mutant line and a link to a database providing a graphical display of the insertion site are available at http://dbsgap.versailles.inra.fr/publiclines/. This sequence has been generated in the framework of the French plant genomics program 'Genoplante' (http://www.genoplante.com and http://genoplante-info.infobiogen.fr). ö /clone_lib="Arabidopsis thaliana T-DNA insertion lines" Gaps ö Score 8.4; DB 1; Length 12; Pred. No. 0.46; 0; Mismatches 1; Indels 1. .12 /organism="Arabidopsis thaliana" /ecotype="Wassilewskija" 1. .12 /note="T-DNA flanking sequence left border" /mol_type="genomic_DNA" /db_xref="taxon:3702" /clone="342D03" 52.5%; 90.0%; Query Match 52.5 Best Local Similarity 90.0 Matches 9; Conservative 1 CGGCGGCCG 10 2 ceececease 11 misc_feature FEATURES COMMENT 셤 ð

AJ592517 10 bp DNA linear GSS 15-JAN-2004 Arabidopsis thaliana T-DNA flanking sequence, right border, clone AJ592517.1 GI:37942141
GSS; right border; T-DNA flanking sequence.
Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis. 621G09, genomic survey sequence. SOURCE ORGANISM DEFINITION ACCESSION RESULT 2 AJS92517 KEYWORDS VERSION

REFERENCE

Brunaud, V., Balzergue, S., Dubreucq, B., Aubourg, S., Samson, F., Chauvin, S., Bechtold, N., Cruaud, C., DeRose, R., Pelletier, G., Lepiniec, L., Caboche, M. and Lecharny, A.

T-DNA integration into the Arabidopsis genome depends on sequences AUTHORS TITLE

of pre-insertion sites EMBO Rep. 3 (12), 1152-1157 (2002) (bases 1 to 10) Balzergue, S. AUTHORS TITLE JOURNAL JOURNAL PUBMED REFERENCE

Direct Submission

Lountted (123-OCT-2003) Balzerque S., UMRGV, INRA/CNRS, 2 rue
Gabton Cremieux, 91057 Evry cedex, FRANCE
PCR was performed on DNA from transformants of Arabidopsis thaliana
plants from INRA (Versailles). The DNA fragment(s) resulting from
the PCR were directly sequenced from the left or the right border
to determine the genomic sequence flanking the insertion. T-DNA
derived sequences were removed. Information to order the
corresponding mutant line and a link to a database providing a
graphical display of the insertion site are available at
http://dbsgap.versailles.inra.fr/publiclines/. This sequence has
been generated in the framework of the French plant genomics
program 'Genoplante' (http://www.genoplante.com and
http://genoplante-info.info.info.gen.fr).
Location/Qualifiers COMMENT

organism="Arabidopsis thaliana"

FEATURES

est20.res

```
Submitted (13-0CT-2003) Balzergue S., UMRGV, INRA/CNRS, 2 rue Gaston Cremieux, 91057 Evy cedex, FRANCE
Gaston Cremieux, 91057 Evy cedex, FRANCE
PCR was performed on DNA from transformants of Arabidopsis thaliana plants from INRA (Versaillea). The DNA fragment(s) resulting from the PCR were directly sequenced from the left or the right border to determine the genomic sequence flanking the insertion. T-DNA derived sequences were removed. Information to order the corresponding mutant line and a link to a database providing a graphical display of the insertion site are available at http://dbsgap.versailles.inra.fr/publiclines/. This sequence has been generated in the framework of the French plant genomics program 'Genoplante' (http://www.genoplante.com and http://genoplante-info.infobiogen.fr).

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arabidopsis thaliana T-DNA flanking sequence, right border, clone A67H07, genomic survey sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                       o;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brunaud, V., Balzerque, S., Dubreucq, B., Aubourg, S., Samson, F., Chauvin, S., Bechtold, N., Cruaud, C., DeRose, R., Pelletier, G., T-DNA integration into the Arabidopsis genome depends on sequences of pre-insertion sites
ENBO Rep. 3 (12), 1152-1157 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AJ598409.1 GI:37948037
GSS; right border; T-DNA flanking sequence.
Arabidopsis thaliana (thale cress)
Arabidopsis thaliana
Eukaryota; Viridiplana, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicotyledons; rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
/mol_type="genomic DNA"
/Mb_Xref="taxon:3702"
/clone="621G9"
/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="467H07"
/clone_lib="Arabidopsis thaliana T-DNA insertion lines"
                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
0
                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 43.8%; Score 7; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 1.2; Matches 7; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                               Query Match 43.8%; Score 7; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 1.2; Matches 7; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Arabidopsis thaliana"
/mol_type="genomic DNA"
/db_xref="taxon:3702"

    .10
/note="T-DNA flanking sequence
right border"

    .10
/note="T-DNA flanking sequence
right border"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /ecotype="Wassilewskija"
                                                                                                      /ecotype="Wassilewskija"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 (bases 1 to 10)
Balzergue, S.
Direct Submission
                                                                                                                                                                                                                                                                                                                                        5 GGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                        1 GGGCGGC 7
                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
AJS98409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
```

10 GCATCGT 16

```
Db 3 GCATCGT 9
Search completed: May 9, 2006, 16:40:51
Job time : 0.001 secs
```

```
ACCESSION: CO835561
ACCESSION: E13679
                                                                                                                                        ACCESSION: ACCESSION: ACCESSION: ACCESSION: ACCESSION:
                                                                                                                                                                                                                           ACCESSION:
ACCESSION:
ACCESSION:
                                                                                                                                                                                                         ACCESSION:
ACCESSION:
ACCESSION:
                                                                                                                                                                ACCESSION:
                                                                                                                                                                            ACCESSION:
                                                                                                                                                                                  ACCESSION:
                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                            ACCESSIC
ACCESSIC
ACCESSIC
ACCESSIC
                                                                                                                                  ACCESSI
                                                                                                                                                                                        ACCESSI
ACCESSI
                                                                                                                                                                                                                                                                                                                                     ACCESSIC
ACCESSIC
ACCESSIC
ACCESSIC
ACCESSIC
ACCESSIC
ACCESSIC
ACCESSIC
                                                                                                                                                                                                                                                                      ACCESS
     AR610614
AR610632
AR610633
AR610633
AR610631
AR610631
AR610634
BD273171
BD273171
AR610666
I114742
AR100302
AR3010555
AR6106597
AR6106597
AR6106597
AR610597
AR751214
4.4.4.4.4.0.0.0.0.0.0.0.0.0.0.4.4.4.
000000
                                                                      8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                  .....
99
101
101
102
103
105
                                                                       0 0 0
                                                                                                                                        000000000
                                                                                                                                                                                                                                                                                                                                                                                                      υ
                                                                                                                             Genkank | EMBC
                                                                                                                                                                                                                                                            ACCESSION: 172535
ACCESSION: AR610573
ACCESSION: AR610573
ACCESSION: AR03459
ACCESSION: AR03459
ACCESSION: AR03459
ACCESSION: AR03459
ACCESSION: AR61057
ACCESSION: AR61057
ACCESSION: AR61057
ACCESSION: AR61057
ACCESSION: AR61057
ACCESSION: AR610530
                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION: CQ766479
ACCESSION: 114717
ACCESSION: 132804
ACCESSION: 170516
ACCESSION: AR610554
                                                                                                                                                                                                                                           ACCESSION: AX440516
ACCESSION: BD225385
ACCESSION: AR349583
                                     2006, 16:42:25 ; Search time 0.001 Seconds (without alignments) 70.304 Million cell updates/sec
                                                                                                                                                                                     No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, derived by analysis of the total score distribution.
     5.1.8
Biocceleration Ltd.
                                                                                                                     402
                                                                                                                  Total number of hits satisfying chosen parameters:
    GenCore version (c) 1993 - 2006
                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                 Minimum Match 0%
Maximum Match 100%
Listing first 201 summaries
                            using sw model
                                                                                                                                                                                                                                                                                                     143403
143404
AR610551
AR610572
AR610575
AX528621
                                                                                                                                                                                                                                                             172535
AR610573
AR022232
AR034499
AR034500
AR048599
                                                                                                                                                                                                                                                                                                                                          AR610553
AR610574
AR610530
AR610552
AR610594
BD209384
                                                                                                                                                                                                                                                                                                                                                                             AR610593
AR610593
AR610576
AR610596
AR610633
A71448
                                                                                                                                                                                                                                                                                                                                                                                                                             132804
170516
AR610554
                                                                                                                                                                                                                                                                                                                                                                                                                  66419
                                                                                     IDENTITY NUC
Gapop 10.0 , Gapext 0.5
                                                                                                       201 segs, 2197 residues
                                                              US-09-904-968A-20-COPY
16
                                                                           cggcgggcggcatcgt 16
                                                                                                                                                                                                                               ΩÏ
                                                                                                                                length: 0
length: 2000000000
                                                                                                                                                                                                                               DB
                           nucleic search,
                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                              Copyright
                                                                                                                                                                          gedb20:*
                                       6
                                                                                                                                                                                                                   %
Query
Match
                                                                                                                                                                                                                                                                  Post-processing:
```

Score

Result Š. 100000000000

22222

Pred. N score g and is

Database

AR199321 AR218371 AR610532 AR610649

BD161401

A84635

AR351643 AR351735 AR351879

E54841

AR428591

BD087712

sed

88

Minimum I Maximum I

Title: Perfect score:

Sequence:

ı

OM nucleic

ë ë

Run

Scoring table:

Searched:

Page 2

ACCESSION: 174373 ACCESSION: AR3181835 ACCESSION: AR351835 ACCESSION: AR351836 ACCESSION: AR48610721 ACCESSION: AR610721 ACCESSION: AR610732 ACCESSION: AR610732 ACCESSION: AR610751 ACCESSION: AR152465 ACCESSION: AX153009 ACCESSION: AX153009 ACCESSION: AX153009 ACCESSION: AX153009 ACCESSION: AX3301476 ACCESSION: AX331476 ACCESSION: AX331476 ACCESSION: AX331476 ACCESSION: AX331476 ACCESSION: AX3314775 ACCESSION: AX331476 ACCESSION: AX314775 ACCESSION: BD007986	NA linear PAT 28-JUN-2002 PS. Reekitcharoen, B. C kidney disease of Medicine (US)	Length 16; 0; Indels 0; Gaps 0; linear PAT 17-JUL-2003
43.8 10 1 174373 43.8 10 1 AR31835 7 43.8 10 1 AR311835 7 43.8 10 1 AR3121836 7 43.8 10 1 AR610721 7 43.8 10 1 AR610721 7 43.8 10 1 AR610742 7 43.8 10 1 AR123469 7 43.8 10 1 AX123009 7 43.8 10 1 AX133023 7 43.8 10 1 AX133023 7 43.8 10 1 AX5301476 7 43.8 10 1 AX5301476 7 43.8 10 1 AX668191 7 43.8 10 1 AX648175 7 43.8 10 1 AX648175 7 43.8 10 1 AX844775 7 43.8 10 <td>AX440516 AX440516 AX440516 AX440516 AX440516 AX440516 AX440516 AX440516 AX140516 AX110516 AX1106 AX1106</td> <td>ch 16; Cons 16; Cons 16; Cons 1 1 CGGCGGG 1 CGGCGGG BD225385</td>	AX440516 AX440516 AX440516 AX440516 AX440516 AX440516 AX440516 AX440516 AX140516 AX110516 AX1106 AX1106	ch 16; Cons 16; Cons 16; Cons 1 1 CGGCGGG 1 CGGCGGG BD225385
0 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	RESULT 1 AX440516 LOCUS DEFINITION ACCESSION VERYORDS SOURCE ONGANISM REFERENCE AUTHORS TITLE JOURNAL FEATURES SOURCE SOURCE AUTHORS SOURCE	Query Match Best Local Matches 1 Qy 1 Db 1 RESULT 2 BD25385/C LOCUS BD25385/C LOCUS LOCUS LOCUS UNCTSION VERSION VE
ACCESSION:108900 ACCESSION:118784 ACCESSION:195620 ACCESSION:195620 ACCESSION:AX099035 ACCESSION:AX099036 ACCESSION:AX624323 ACCESSION:AX624323 ACCESSION:AX624323 ACCESSION:AX624323 ACCESSION:AX629602 ACCESSION:AX629602 ACCESSION:AX631744 ACCESSION:AX631744 ACCESSION:AX631732 ACCESSION:AX63132 ACCESSION:BD065267 ACCESSION:BD065267 ACCESSION:BD083132 ACCESSION:BD161209 ACCESSION:BD161209 ACCESSION:BD161209 ACCESSION:BD161209 ACCESSION:BD161209 ACCESSION:BD161209 ACCESSION:BD161209 ACCESSION:BD161209	NO N	ACCESSION: AXX 01308 ACCESSION: AXX 01310 ACCESSION: AXX 01310 ACCESSION: AXX 01310 ACCESSION: AXX 024169 ACCESSION: AXX 024169 ACCESSION: AXX 024891 ACCESSION: AXX 04891 ACCESSION: AXX 04891 ACCESSION: AXX 048656 ACCESSION: BD16 1421 ACCESSION: BD16 1421 ACCESSION: BD16 6510 ACCESSION: BD23 9853 ACCESSION: BD23 9853 ACCESSION: BD23 9853 ACCESSION: BD23 9853 ACCESSION: BD23 9437 ACCESSION: BD24 0050 ACCESSION: BD24 0050 ACCESSION: BD24 177 ACCESSION: CS114174 ACCESSION: CS114174 ACCESSION: CS114174
		10 1 AX301308 10 1 AX301308 10 1 AX301310 10 1 AX304169 10 1 AX004658 10 1 AX004658 10 1 AX069259 10 1 AX069259 10 1 AX069259 10 1 AX107342 10 1 AX107342 10 1 BD135595 10 1 BD13595 10 1 BD136500 10 1 BD239033 10 1 BD239033 10 1 BD239033 10 1 BD239033 10 1 BD239030 10 1 BD240706 10 1 BD240706
cocces cocces cocces cocces e e e e e e e e e e e e e e e e e e		. 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
0 00000000 00 0000 000 0000 0000 0000 0000		000 000 0 00 0000 00 111111111111111111

m

ö

Gaps

ö

PAT 15-DEC-2004

COMMENT

```
Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 659 3D-NOV-2004;
Bast Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 (bases 1 to 15)
Moribhita, H., Kanamori, T. and Nobuhara, M.
Isolated DNA encoding novel protease inhibitory polypeptide
Patent: US 5792629-A 109 11-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 14;
                                          Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                           linear
                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2;
                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67.5%; Score 10.8; DB 1;
85.7%; Pred. No. 22;
tive 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                       AR610573 14 bp D1
Sequence 695 from patent US 6825174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR022232 15 bp Dr
Sequence 109 from patent US 5792629.
AR022232.1 GI:3976294
                                       Score 11.4; C
Pred. No. 16;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 20;
0; Mismatches
          /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .15
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 10.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .14
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                      AR610573.1 GI:56666049
                                        71.2%;
92.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGAGGCGGCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GCGGCGGCATCGT 16
                                                                                                                              3 cccaccccar 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match
Best Local Similarity 85.74
Best Local 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15 GCAGGCGCGTCGT 2
                                                                                                 1 CGGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                Unclassified.
1 (bases 1 to 14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 67.5
Best Local Similarity 85.7
Matches 12; Conservative
                                                                      12; Conservative
                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unclassified.
                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                                                             Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR034499
                                                                                                                                                                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
AR022232/c
                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
FEATURES
                                                                   Matches
                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                          RESULT 5
AR610573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
AR034499
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                 ð
                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 17-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 03-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
Unknown.
Unclassified.
1 (bases 1 to 15)
1 (hases 1 to 15)
2 (hung, H.-T.
Anti-sense oligodeoxynucleotide to fibrogenic cytokine TGF..beta.
and use thereof
Patent: US 5681988-A 5 04-NOV-1997;
Location/Qualifiers
                                                                   60/107504 PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                              ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                   /organism='Herpes simplex virus'. Location/Qualifiers
                                                                                                                                                                                                                                                               Score 12.4; DB 1; Length 14;
Pred. No. 8.3;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 77.5%; Score 12.4; DB 1; Length 14; Best Local Similarity 92.9%; Pred. No. 8.3; Matches 13; Conservative 0; Mismatches 1; Indels
OS Herpes simplex virus
PN JP 2002509733-A/19
PD 02-APR-2002
PF 28-MAR-1999 JP 2000541344
PR 28-MAR-1999 US 60/07972, 06-NOV-1998 US
C12NIS, 06,012015/68/ABR48/00,012NIS/00
CC Targeting antisense library
FH Key
T source 1.14
Cyganism='Herpes simplex virus
FT
                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ruffner, D.E., Pierce, M.L. and Chen, Z. Directed antisense libraries Patent: US 6586180-A 19 01-UUL-2003; University of Utah; Salt Lake City, UT Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                               AR349583 14 bp 1
Sequence 19 from patent US 6586180.
AR349583.1 GI:33750381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         172535 15 bp
Sequence 5 from patent US 5683988.
172535.1 GI:3008674
                                                                                                                                                                                                /organism="unidentified"
/mol_type="genomic DNA"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 92.9%;
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                         2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGCCGCATCG 15
                                                                                                                                                                                                                                                                                                                                                     14 éécéécécérce 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14 GCCGGCCGCCTCG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
```

RESULT 3 AR349583/c DEFINITION

ઠે 셤

FEATURES

ORGANISM

REFERENCE AUTHORS

TITLE JOURNAL

PEATURES

ACCESSION VERSION KEYWORDS

ö

Gaps

ö

PAT 05-DEC-1998

ö

Gaps

ö

PAT 29-SEP-1999

source

JOURNAL

FEATURES

AUTHORS TITLE

REFERENCE

DEFINITION

RESULT 4

g ò

172535

```
PAT 07-0CT-1997
                                                                                                                                         PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 07-0CT-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unclassified.

1 (bases 1 to 15)
Dzau,V.J. and Kaneda,Y.
Method for producing in vivo delivery of therapeutic agents via
                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                 Dzau,V.J.
Inhibition of proliferation of vascular smooth muscle cell
Patent: US 5821234-A 3 13-OCT-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                 ö
                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                               Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                 Indels
                 5.
                                                                                                                                                                                                                                                                                                                                                                             Query Match 67.5%; Score 10.8; DB 1; Best Local Similarity 85.7%; Pred. No. 22; Matches 12; Conservative 0; Mismatches 2;
                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Score 10.8; DB; Pred. No. 22; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .15
/organism="unknown"
/mol_type="unassigned DNA"
  Best Local Similarity 85.7%; Pred. No. 22; Matches 12; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    liposomes
Patent: US 5631237-A 8 20-MAY-1997,
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                     /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15 bp
Sequence 8 from patent US 5631237.
143403
143403.1 GI:2468647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15 bp
Sequence 9 from patent US 5631237.
143404
143404.1 GI:2468648
                                                                                                                                         AR048600 15 bp
Sequence 3 from patent US 5821234.
AR048600
                                                                                                                                                                                                                                                                                                                           1. .15
/organism="unknown"
                                                                                                                                                                                 AR048600.1 GI:5970943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 67.5%;
Best Local Similarity 85.7%;
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGCGGCGCCATCG 15
                                           2 GGCGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGAGGGCGCCATGG 14
                                                                      1 GGAGGGCGCCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                       15 GGAGGCGCCATGG 2
                                                                                                                                                                                                                                                     (bases 1 to 15)
                                                                                                                                                                                                                                     Unclassified.
                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 12
143404/c
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                      DEFINITION
ACCESSION
                                                                                                             RESULT 10
AR048600/c
                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
143403
                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                               PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 29-SEP-1999
                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                           Dzau,V.J.
Inhibition of proliferation of vascular smooth muscle cell
Patent: US 5869462-A 2 09-FEB-1999;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dzau,V.J.
Inhibition of proliferation of vascular smooth muscle cell
Patent: US 5869462-A 3 09-FEB-1999;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dzau, V.J.
Inhibition of proliferation of vascular smooth muscle cell
Patent: US 5821234-A 2 13-OCT-1998;
                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                       Query Match 67.5%; Score 10.8; DB 1; Length 15; Best Local Similarity 85.7%; Pred. No. 22; Matches 12; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 67.5%; Score 10.8; DB 1; Length 15; Best Local Similarity 85.7%; Pred. No. 22; Matches 12; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67.5%; Score 10.8; DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .15
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .15
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                    1. .15
/organism="unknown"
/mol_type="unassigned DNA"
Sequence 2 from patent US 5869462.
AR034499
AR034499.1 GI:5950104
                                                                                                                                                                                                                                                                                                                                                                             AR034500 15 bp
Sequence 3 from patent US 5863462.
AR034500 GI:5950105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR048599 15 bp
Sequence 2 from patent US 5821234.
AR048599 GI:5970942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                 2 GGCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                               1 GGAGGCGGCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
Unclassified.
1 (bases 1 to 15)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
Unclassified.
1 (bases 1 to 15)
                                                                                                (bases 1 to 15)
                                                                     Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                   RESULT 8
AR034500/c
                                                                                              REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 9
AR048599
```

ô

ö

ge20.res

8 名

```
67.5%; Score 10.8; 85.7%; Pred. No. 22;
                                                                                                                                                                                                                                                                                                                                                                                      1. .12
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX528621.1 GI:25172710
                                                                                                                                                                                                                                                                                                                                                                                                                                        65.0%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 65.0%;
Best Local Similarity 91.7%;
Matches 11; Conservative
                                                                     2 GGGGGGGGGATCG 15
                                                                                       1 GGAGGCCGCATGG 14
                                           12; Conservative
                                                                                                                                                                                                                                                                           (bases 1 to 12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGAGGCGGCAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGCGGCCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12 GGAGGCGGCAT 1
                                                                                                                                                                                                                                                              Unclassified.
                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX528621
                                                                                                                                                                                                                                                 Unknown.
                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 16
AX528621/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                            DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                ORGANISM
                                           Matches
                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                       VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                    AR610575
                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                        à
                                                                                              유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                  PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce,J.W.
Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Parent: US 6855174.A 673 30-NOV-2004;
East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 694 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers
           Unclassified.

1 (bases 1 to 15)
Dzau,V.J. and Kaneda,Y.
Method for producing in vivo delivery of therapeutic agents via
                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                               DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                             Score 10.8; DB
Pred. No. 22;
0; Mismatches
                                                                                                                                                                                                                                                                                                                AK610551 15 bp Di
Sequence 673 from patent US 6825174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR610572 15 bp DN
Sequence 694 from patent US 6825174.
AR610572.1 GI:56666048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67.5%; Score 10.8; D
85.7%; Pred. No. 22;
:ive 0; Mismatches

    15
    /organism="unknown"
    /mol_type="unassigned DNA"

                                                                 liposomes
Patent: US 5631237-A 9 20-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .15
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="genomic DNA"
                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="unknown"
                                                                                                                                                                                                                                                                                                                                         AR610551
AR610551.1 GI:56666027
                                                                                                                                                           Query Match
Best Local Similarity 85.7%;
Matches 12; Conservative
                                                                                                                                                                                                                  2 GGCGGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGAGGGGGGCATGG 15
                                                                                                                                                                                                                                   Unknown.
Unclassified.
1 (bases 1 to 15)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 67.5
Best Local Similarity 85.7
Matches 12, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified.
1 (bases 1 to 15)

    (bases
Nyce, J.W.

                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown
                                                                                                          source
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                       AUTHORS
                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
AR610572
                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                     RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                             PEATURES
                                                                                                                                                                                                                                                                                                   AR610551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                    TITLE
```

g 8

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                            PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 21-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                Nyce, J.W.
Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, alleray(iss) & inflammation
Patent: US 6825174-A 697 30-NOV-2004;
East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gарв
                                      Gaps
                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 12;
 Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chernajovsky,Y., Dreja,H.S. and Adams,G.
Latency associated peptide for providing latency to
pharmaceutically active proteins
Patent: Wo OSSTOB-A 107 18-JUL-2002;
QUEEN MARY & WESTPIELD COLLEGE (GB)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 12;
                                                                                                                                                                                          linear
                                  2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IndelB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 10.4; DB 1;
Pred. No. 20;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .12
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="texon.32630"
/note="LAP-hulFNbeta construct"
                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                        AR610575 12 bp D1
Sequence 697 from patent US 6825174.
AR610575.1 GI:56666051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX528621 12 bp Dr
Sequence 107 from Patent WO02055098.
                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 10.4; D
Pred. No. 20;
0; Mismatches
```

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                       RESULT 20
AR610552
                                                                                                                                                                 Matches
     AUTHORS
                                                    JOURNAL
                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                 KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 21
                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR610594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
               TITLE
                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Locus
                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            엄
                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                           PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 15-DEC-2004
                                                                                                                                     Nyce, J.W.
Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 675 30-NOV-2004;
East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cycycy formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy (ies) & inflammation
Patent: US 6825174-A 696 30-NOV-2004;
East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                DB 1; Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ch 65.0%; Score 10.4; DB 1; Length 13; I Similarity 91.7%; Pred. No. 23; 11; Conservative 0; Mismatches 1; Indels
                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                         <u>ب</u>
                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                               Score 10.4; DB
Pred. No. 23;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR610530 14 bp DN
Seguence 652 from patent US 6825174.
AR610530
                    Sequence 675 from patent US 6825174.
                                                                                                                                                                                                                                                                                                                                                                                                                    AR610574 13 bp DI
Sequence 696 from patent US 6825174.
                                                                                                                                                                                                                                1. .13
/organism="unknown"
/wol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="unknown"
/mol_type="genomic DNA"
                                                             AR610553.1 GI:56666029
                                                                                                                                                                                                                                                                                                                                                                                                                                             ARĞ10574
AR610574.1 GI:56666050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR610530.1 GI:56666006
                                                                                                                                                                                                                                                                                65.0%;
91.7%;
                                                                                                                           (bases 1 to 13)
                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 91.7
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unclassified.
1 (bases 1 to 13)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unclassified.
1 (bases 1 to 14)
                                                                                                                                                                                                                                                                                                                               2 GGCGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                        2 GGAGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 ĠĠĄĠĠĊĠĠĊĄŢ 12
                                                                                                              Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown.
                                                                                       Unknown.
                                                                                                    Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                  DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                        AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
RESULT 17
AR610553
                                                                                                                            REFERENCE
                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                              RESULT 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                         AR610574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR610530
                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                        셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                      PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 15-DEC-2004
Nyce,J.W.
Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 652 30-NOV-2004;
East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation.
Patent: US 6825174-A 674 30-NOV-2004;
Bast Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                           Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                             Indels
                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65.0%; Score 10.4; DB 1; 91.7%; Pred. No. 25; iive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 716 from patent US 6825174. AR610594
                                                                                                                                                                                                                                                                                                                                                       AR610552
Sequence 674 from patent US 6825174.
                                                                                                                                                                          65.0%; Score 10.4; C
91.7%; Pred. No. 25;
:ive 0; Mismatches
                                                                                                              1. .14
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .13
/organism="unknown"
/mol_type="genomic_DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .14
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                     AR610552
AR610552.1 GI:56666028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR610594.1 GI:56666070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 91.7:
....hes 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 13)
                                                                                                                                                                                                             11; Conservative
                                                                                                                                                                                                                                          2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                        3 GGAGGGCGCAT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGAGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unclassified.
                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown
```

```
3 GCGGGCGCCATCG 15
                                                                                                                Query Match 61.3
Best Local Similarity 84.6
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 GCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGGCGCCATGG 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 11)
                                                                                                                                                                                                    13 eceeccecearce 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 84.6
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                            Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce, J.W.
                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                        Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                              JOURNAL
                                                                                                                                                                                                                                             RESULT 24
AR610593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 25
AR610576
                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                             PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                  셤
                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                       unidentified
unidentified
unidentified
unclassified
unclassified

1 (Dases 1 to 14)

B latt, L., Mcswiggen, J.A., Roberts, E., Pavco, P.A. and Macejak, D.
Enzymatic nucleic acid treatment of diseases or conditions related
to hepatitis C virus infection.

RIBOZYME PHARMACEUTICALS INC
OS Hepatitis virus (hepatitis C virus)
PD 08-MAY-2002
PF 26-ARP-1999 US 60/083217,18-SEP-1998 US 60/100842 PR
27-APR-1999 US 09/257608,23-MAR-1999 US 09/274553 PI
LAWRENCE BLATT, JAMES A MCSWIGGEN, ELISABETH ROBERTS, PAMELA A PI
                                ö
                                                                                                                                                      BD209384 linear PAT 17-JUL-2003
Enzymatic nucleic acid treatment of diseases or conditions related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ပ္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 02-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C12N9/00, A61K31/7105, A61K38/21, A61K48/00, A61P31/12, C12N15/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \ensuremath{\mathsf{Enzymatic}} nucleic acid treatment of diseases or conditions related to
                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
Unclassified.
1 (bases 1 to 14)
Maugh,K.J., Anderson,D.M., Strausberg,S.L., Strausberg,R. and
Wei,T.

    .14
/organism='Hepatitis virus (hepatitis

                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
    DB 1; Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 14;
                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hepatitis C virus infection.

Kev Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
Query Match 61.2%; Score 9.8; DE Best Local Similarity 84.6%; Pred. No. 31; Matches 11; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14 bp
Sequence 33 from Patent WO 8807076.
108913.
108913.1 GI:588386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 61.3%; Score 9.8; DE Best Local Similarity 84.6%; Pred. No. 35; Matches 11; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .14
/organism="unidentified"
/mol_type="genomic RNA"
/db_xref="taxon:32644"
                                                                                                                                                                                     to hepatitis C virus infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                 BD209384
BD209384.1 GI:33019154
JP 2002512791-A/2974.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  virus)'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DENNIS MACEJAK
                                                        3 GCGGGCGCCATCG 15
                                                                                    1 GAGGGCGCCATGG 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CGGCGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13 CGGCGAGCTGCAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A61K37/66,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        강품분분
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
                                                                                                                                          BD209384/c
                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loca
Matches
                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                             RESULT 22
                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             108913/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                         ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                         PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ics) & inflammation Patent: US 6825174-A 715 30-NOV-2004; Bast Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 698 30-NOV-2004;
East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
 BY
PRODUCTION OF BIOADHESIVE PRECURSOR PROTEIN ANALOGS GENETICALLY-ENGINERSED ORGANISMS
PATENT: WO 8807076-A 33 22-SEP-1988;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61.2%; Score 9.8; DB 1; Length 14; 84.6%; Pred. No. 35; ative 0; Mismatches 2; Indels
                                                                                                                                                Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 9.4; DB 1; Length 11;
Pred. No. 30;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 bp DN Sequence 698 from patent US 6825174. AR610576 AR610576.1 GI:56666057
                                                                                                                                                                                                                                                                                                                                                     AR610593 14 bp DN
Sequence 715 from patent US 6825174.
AR610593
                                                                                                                                              Score 9.8; Di
Pred. No. 35;
                                                                                                                                                                                  0; Mismatches
                                                                         1. .14
/organism="unknown"
/wol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .14
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .11
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                           AR610593.1 GI:56666069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.7%;
                                                                                                                                              61.3%;
84.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 58.7
Best Local Similarity 90.9
Matches 10; Conservative
```

```
A71448.1 GI:4775060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jnknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Method
                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                         RESULT 29
CQ766479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 30
114717/c
                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
VERSION
KEYWORDS
                                                                                                                 JOURNAL
                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                           ઠ
                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                      PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 07-MAY-1999
                                                                                                                                                                                                                               Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ides) & inflammation.
Patent: US 6825174-A 718 30-NOV-2004;
Bast Carolina University; Greenville, NC
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: 108 30.NOV-2004;
Bast Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                   Score 9.4; DB 1; Length 11; Pred. No. 30; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 58.7%; Score 9.4; DB 1; Length 11; Best Local Similarity 90.9%; Pred. No. 30; Matches 10; Conservative 0; Mismatches 1; Indels
                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                  11 bp DN
Sequence 718 from patent US 6825174.
AR610596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11 bp DR
US 6825174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12 bp
Sequence 7 from Patent WO9813521.
A71448
                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                 1. .11
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 755 from patent
AR610633
AR610633.1 GI:56666109
                                                                                                                                         AR610596.1 GI:56666072
                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 90.9%;
Matches 10; Conservative (
                                                                                                                                                                                            Unclassified.
1 (bases 1 to 11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unclassified.
1 (bases 1 to 11)
                                                                                                                                                                                                                                                                                                                                                                                                                      3 GCGGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GAGGGCGCCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 GGCGGCATCG 15
            GGCGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGCGCCATGC 11
                                    1 GGAGGGCGCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce, J.W.
                                                                                                                                                                                                                       Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR610633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
                                                                                                                                                                     Unknown.
                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 28
A71448/c
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                              DEFINITION
                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 27
AR610633
                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                         RESULT 26
                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                         VERSION
KEYWORDS
                                                                                        AR610596
                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                   셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 03-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 26-SEP-1995
                                                         1 (bases 1 to 12)
Fesce, R. and Consalez, G.
METHOD FOR THE DIFFERENTIAL SCREENING OF GENE EXPRESSION BY RANDOM PRIMED REVERSE TRANSCRIPTION-POLYMERASE CHAIN REACTION
FESCE RICCARDO (IT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 12)
Morishita,H., Kanamori,T. and Nobuhara,M.
Polypeptide, DNA fragment encoding the same, drug composition containing the same and process for producing the same Patent: US 5451659-A 68 19-2EP-1995;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                 58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 35; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 35; cive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent: WO 2004005547-A 440 15-JAN-2004;
IMPERIAL COLLEGE INNOVATIONS LIMITED (GB)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .12
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12 bp DNA
Sequence 440 from Patent WO2004005547.
CQ766479.1 GI:44908739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12 bp 1
Sequence 68 from patent US 5451659.
114717

    .12
/organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"

                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="HS motif"
unidentified
unidentified
unclassified sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    I14717.1 GI:997200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                          10; Conservative
                                                                                                                                                                                                                                                                                                                                                                               5 GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CGGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ceecceeceec 11
                                                                                                                                                                                                                                                                                                                                                                                                                    ~
                                                                                                                                                                                                                                                                                                                                                                                                            12 GAGCGGCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inclassified.
                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 10: Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Weinzierl, R.
```

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                ORGANISM
                                                                                                                        AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                     RESULT 34
AR610595
                                                                                                                                                                          JOURNAL
                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 35
                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR610614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                ö
                                                                                                                                                                                                PAT 06-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 03-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
Unknown.
Unknown.
Unclassified.
1 (Dases 1 to 12)
Morishita,H., Kanamori,T. and Nobuhara,M.
Polypeptide, DNA fragment encoding the same, drug composition containing the same and process for producing the same Patent: US 5679770-A 68 21-OCT-1997;
Location/Qualifiers
                                                                                Gaps
                                                                                                                                                                                                                                                                                      Unclassified.

1 (Dases 1 to 12)
Moribhita,H., Kanamori,T. and Nobuhara,M.
Polypeptide, DNA fragment encoding the same, drug composition containing the same and process for producing the same
Patent: US 5589360-A 68 31-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                 Query Match 58.7%; Score 9.4; DB 1; Length 12; Best Local Similarity 90.9%; Pred. No. 35; Matches 10; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 9.4; DB 1; Length 12;
Pred. No. 35;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 58.7%; Score 9.4; DB 1; Length 12; Best Local Similarity 90.9%; Pred. No. 35; Matches 10; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
1. .12
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                             132804 12 bp 1
Sequence 68 from patent US 5589360.
                                                                                                                                                                                                                                                                                                                                                                                            /organism="unknown"
/wol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  170516 12 bp
Sequence 68 from patent US 5679770.
1770516
170516.1 GI:3006651
                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                     58.7%;
                                                                                                                                                                                                                                     I32804.1 GI:1823595
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                    6 GGCGCCATCGT 16
                                                                                                                  12 GGCGCGTCGT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6 GGCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 GGCGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12 GGCGGCGTCGT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12 GGCGCCGTCGT
                                                                                                                                                                                                                                                               Unknown.
                                                                                                                                                                                                                                                                              Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown
                                                                                                                                                                                                                          I32804
 source
                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                     RESULT 31
132804/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 32
I70516/c
                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                       ઠે
                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
```

RESULT 33 AR610554

```
PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 15-DEC-2004
                                                                                                                                                                      Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation Patent: US 6825174-A 67 30-NOV-2004; East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ics) & inflammation.
Patent: US 6825174-A 717 30-NOV-2004;
Bast Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nyce,J.W. Composition, formulations & method for prevention & treatment of
                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                 58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 35; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 35;
        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
Sequence 676 from patent US 6825174. AR610554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12 bp DN
Sequence 717 from patent US 6825174.
AR610595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR610614 12 bp DN
Sequence 736 from patent US 6825174.
AR610614. GI:56666090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                1. .12
/organism="unknown"
/mol_type="genomic DNA"

    12 /organism="unknown"
    /mol_type="genomic DNA"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                     AR610554.1 GI:56666030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR610595.1 GI:56666071
                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 90.5%,
-%a 10; Conservative
                                                                                                         Unknown.
Unclassified.
1 (bases 1 to 12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 12)
                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGAGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 GCGGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GAGGGGGGCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unclassified.
                                                                                                                                                          Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce, J.W
                                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
```

Gaps

```
PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce,J.W.

Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 753 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers
                                                                                                                                                                                                                                                                          Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 735 3D-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers
   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 39; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
   Indels
   ..
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                          Sequence 735 from patent US 6825174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR610616 10 bp DN Sequence 738 from patent US 6825174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13 bp D1
Sequence 753 from patent US 6825174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 9.4; DI
Pred. No. 39;
                                                                                                                                                                                                                                                                                                                                                                 1. .13
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .13
/organism="unknown"
/mol_type="genomic DNA"
   .;
0
                                                                                                                                                                         AR610613.1 GI:56666089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR610631
AR610631.1 GI:56666107
                                                                                                                                                                                                                                                                                                                                                                                                                        58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 90.5%,
Best Local Similarity
                                                                                                                                                                                                                      Unknown.
Unclassified.
1 (bases 1 to 13)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 13)
 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10; Conservative
                              12
                                                       GGAGGCGGCA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 ĠĠĠĊĠĠĊĂTĠĠ 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCCGCATGG 11
                              GGCGGGCGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                Nyce, J.W.
                                                                                                                                                                                                       Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jnknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jnknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
                                                                                                                                         DEFINITION
                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loca
Matches
                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
 Matches
                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 40
                                                                                                   RESULT 38
                                                                                                                 AR610613
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR610616
                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR610631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                       SOURCE
                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                          PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce,J.W.

Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 754 30-NOV-2004;
East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ides) & inflammation
Patent: US 6825174-A 653 30-NOV-2004;
Bast Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                             Gaps
diseases and conditions associated with bronchoconstriction,
                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1; Length 13;
                                                                                                                        ch 58.7%; Score 9.4; DB 1; Length 12; 1 Similarity 90.9%; Pred. No. 35; 10; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 12;
                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                        Š
                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
            allergy(ies) & inflammation
Patent: US 6825174-4 736 30-NOV-2004;
East Carolina University; Greenville,
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 653 from patent US 6825174. AR610531.1 GI:56666007
                                                                                                                                                                                                                                                                                         AR610632 12 bp DN
Sequence 754 from patent US 6825174.
AR610632
AR610632.1 GI:56666108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 9.4; DI
Pred. No. 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 9.4; D
Pred. No. 35;
                                                                       1. .12
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 90.9%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown.
Unclassified.
1 (bases 1 to 13)
                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 12)
                                                                                                                                                                                        5 GGCGGCATCG 15
                                                                                                                                                                                                                   GGGCGCCATGG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ĠĠĠĊĠĠĊĂŢĠĠ 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .13
                                                                                                                                                                                                                                                                                                                                                                               Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce, J.W.
                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                             RESULT 36
AR610632
                                                                                                                                                          Matches
                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR610531
                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                   a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

ö

Gaps

ö

Gaps

Я

09/220510 PI

Key

Wed May 10 10:49:50 2006

```
C12N15/09,A61K31/713,A61K35/76,A61K48/00,A61P3/06,A61P3/10, PC
A61P7/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Expression vectors comprising multiple shear stress responsive elements (SSRE) and methods of use for treating disorders related to vasculogenessis and/or angiogenesis in a shear stress environment Patent: US 6440726-A 4 27-AUG-2002;
                                                                                                                                                                                                                                                                                C12N1/19, C12N1/21, C12N5/10, G01N33/15, G01N33/50, C12N15/00, C12N5/ PC
                                                                                                                                                                                                              A61P9/12,
°C A61P11/00,A61P13/10,A61P17/02,A61P19/02,A61P35/00,A61P43/00,
                                                                                                                                                                                              A61P9/02, A61P9/04, A61P9/06, A61P9/08, A61P9/10, A61P9/10, A61P9/10,
                                                                                                                                                                                                                                                                                                                 Description of Artificial sequence: An SP1 sequence. FH Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                     organism='Artificial Sequence'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 11;
                     FLORENCE MEDICAL LTD
OS Artificial Sequence
No JP 2002533113-A/4
PD 08-0CT-2002
PF 23-DEC-1999 JP 2000591168
PR 24-DEC-1998 US 60/113863,24-DEC-1998 US

    .11
        /organism="synthetic construct"
/mol type="genomic DNA"
        /db_xref="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
        Patent: JP 2002533113-A 4 08-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          56.2%; Score 9; DB 1;
100.0%; Pred. No. 38;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR610615
LOCUS AR610615 11 bp DN
DEFINITION Sequence 737 from patent US 6825174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56.2%; Score 9; DB 1
100.0%; Pred. No. 38;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 4 from patent US 6440726.
AR224418
AR22418.1 GI:2333197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .11
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9; Conservative
                                                                                                                          NITZAN RESNICK
PC C12N15/09,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GGCGGGCGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ព
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGCGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Resnick, N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR224418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                     11
                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 43
AR224418
       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 44
                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Expression vectors comprising multiple shear stress responsive elements (SSRE) and a gene of interest and methods of use thereof.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Expression vectors comprising multiple shear stress responsive elements (SSRE) and a gene of interest and methods of use thereof
                                                                                                                                   Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation Patent: US 6825174-A 756 30-NOV-2004; Bast Carolina University; Greenville, NC Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                              Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 56.2%; Score 9; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 33; Matches 9; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                   allergy(ies) & inflammation
Patent: US 6825174-A 738 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                other sequences; artificial sequences.
1 (bases 1 to 11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR610634 10 bp DN
Sequence 756 from patent US 6825174.
                                                                                                                                                                                                                                                                                                            56.2%; Score 9; DB 1
100.0%; Pred. No. 33;
live 0; Mismatches
                                                                                                                                                                                                                                                                          /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 bp
                                                                                                                                                                                                                                          1. .10
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="unknown"
 AR610616
AR610616.1 GI:56666092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD273171.1 GI:33082939
JP 2002533113-A/4.
synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR610634.1 GI:56666110
                                                                                   Unclassified.
1 (bases 1 to 10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unclassified.
                                                                                                                                                                                                                                                                                                                                              9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 2 GGCGGCAT 10
                                                                                                                                                                                                                                                                                                                                                                                5 GGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 GGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGCGCCAT 9
                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity

    (bases
Resnick, N.

                                                                                                                   Nyce, J.W
                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR610634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD273171
                                                                       Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
ACCESSION
                                                                                                                                                                                                                                                                                                                                          Matches
                VERSION
KEYWORDS
                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR610634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BD273171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                     TITLE
                                                   SOURCE
```

ઠે 유 ö

Gaps

.. 0

PAT 26-SEP-2002

linear

ö

Gaps

ö

PAT 15-DEC-2004

linear

```
Unknown
                                                                                                                                                                                                                                                                                 Unknown
    source
                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX100302/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
KEYWORDS
SOURCE
                                                                                                                                                                         RESULT 47
                                                                                                                                                                                      114742/c
                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                        PAT 05-JAN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 14-FEB-2001
                                                                                                     Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 737 30-NOV-2004;
Bast Carolina University; Greenville, NC
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Koizumi,T., Hamano,Y. and Yamamoto,S.
Process for improving efficiency of DNA amplification reactions
Patent: EP 1491637-A 8 29-DEC-2004;
Nichirei Corporation (JP)
Location/Qualifiers
                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .12
/organism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"
/note="Description of Artificial Sequence: primer"
                                                                                                                                                                                                                                                                  ·,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tang.W.-J. and Gilman.A.G. Soluble mammallan adenylyl cyclase and uses therefor Patent: VS 6107076-A 27 22-AUG-2000; Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                  IndelB
                                                                                                                                                                                                                                        DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56.2%; Score 9; DB 1; Length 12; 100.0%; Pred. No. 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Pred. ...
                                                                                                                                                                                                                                      Similarity 100.0%; Score 9; DB 1
Similarity 100.0%; Pred. No. 38;
9; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR106668 12 bp
Sequence 27 from patent US 6107076.
AR106668 1 GI:12821198
                                                                                                                                                                                                                                                                                                                                                                             CQ972127 12 bp
Sequence 8 from Patent EP1491637.
CQ972127
                                                                                                                                                                                    1. .11
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                              CQ972127.1 GI:57163411
            GI:56666091
                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
                                                               Unclassified.
1 (bases 1 to 11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9; Conservative
                                                                                                                                                                                                                                                                                            5 GGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                     2 GGGCGCAT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                        Query Match
Best Local Similarity
AR610615
AR610615.1
                                                                                           Nyce,J.W
                                      Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                     LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 46
AR106668/c
                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
 ACCESSION
                                                                             REFERENCE
                                                                                          AUTHORS
                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                              RESULT 45
                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                            CQ972127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                        FEATURES
                                                                                                      TITLE
                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                     PAT 02-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 10-APR-2001
                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                   [Jases 1 to 12]
Birkenmeyer, L.G., Ching, S., Ohhashi, Y. and Winkler, J.K.
Oligonucleotides and methods for the detection of Neisseria
genorrhoeae
Patent: US 5453355-A 7 26-SEP-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .12
/organism="synthetic construct"
/mol_type="unassigned RNA"
/mol_tret="teaxon:32630"
/noTe="5 -Bindungsarm fur Ribozym gegen E2F1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 8.8; DB 1; Length 12;
Pred. No. 48;
0; Mismatches 2; Indels
                                                  Score 8.8; DB 1; Length 12;
Pred. No. 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Grassi,G., Kuhn,A.C. and Kandolf,R.
Ribozymes used for restenosis prevention
Patent: WO 0121789-A 15 29-MAR-2001;
Eberhard-Karls-Universitaet Tuebingen; (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RNA
                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .12
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48;
                                                                                                                                                                                                                                12 bp
Sequence 7 from patent US 5453355.
114742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 15 from Patent WO0121789.
AX100302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 8.8;
Pred. No. 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX100302.1 GI:13619329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55.0%;
                                                 Query Match
Best Local Similarity 83.3%;
Matches 10; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55.0%;
83.3%;
                                                                                                                                                                                                                                                                                     I14742.1 GI:1249651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 83.3
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 83.3
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 GGGCGCCATCGT 16
                                                                                                                   3 GCGGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12 GGCGGGGTCGT 1
                                                                                                                                       12 GCTGGAGGCATC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 GGCGGACGGCTT 1
                                                                                                                                                                                                                                                                                                                                                       Unclassified.
```

```
Hominidae; Homo.
                                                                                                                                                                                                                                                    4 CGGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 CGGGGGGCAT 13
                                                                                                                                                                                                                                                                       10 CGGGCGGGAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 CGGGCGGGAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unclassified
                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nyce, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                 Query Match
                                                                                                                                Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                         RESULT 52
CS114180/c
                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                         Matches
                               AUTHORS
                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 53
AR610577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kahl,G., Winter,P., Krueger,D., Reich,S., Matsumura,H. and Terauchi,R.
Use of a type iii restriction enzyme to isolate identification tags comprising more than 25 nucleotides
Patent: WO 2004099445-A 43 18-NOV-2004,
Iwate Prefectual Government (JP)
Location/Qualifiers
                               PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 01-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 25-JAN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .10
/organism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"
/note="Description of Artificial Sequence:Synthetic DNA
(Tag Sequence)"
                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                      1 (bases 1 to 10)
Brant, S.R., Yun, C.Chris., Donowitz, M. and Tse, C.-M.
Method of identifying agents that affect human NHE3
Patent: US 5871919-A 7 16-FEB-1999;
Location/Qualifiers
                                                                                                                                                                                                                                                              52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 46; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 8.4; DB 1; Length 10;
Pred. No. 46;
0; Mismatches 1; Indels
                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 bp DNA Sequence 206 from Patent WO2005001142. CQ986662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 43 from Patent WO2004099445.
                                                                                                                                                                                                           1. .10
/organism="unknown"
/mol_type="unassigned DNA"
                        10 bp
Sequence 7 from patent US 5871919.
AR035573.1 GI:5952241
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CQ944896.1 GI:56294237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CQ986662.1 GI:58194579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    synthetic construct
synthetic construct
                                                                                                                                                                                                                                                             Query Match 52.5
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9; Conservative
                                                                                                                                                                                                                                                                                                                                     1 GCAGGCGGCA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGGCGCA 10
                                                                                                                                                                                                                                                                                                                      3 GCGGCCGCCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 GCGGGCGGCA 12
                                                                                                            Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                        DEFINITION
                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 51
CQ986662/c
                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                              JOURNAL
FEATURES
RESULT 49
AR035573
                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                      REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                         RESULT 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                    CQ944896
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 24-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 699 30-NOV-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Day.K.J., Cottrell,S., Distler,J., Morotti,A., Yamamura,S., Dekker,S., Ocamp,Y. and Devos,T.
Methods and nucleic acids for the analysis of gene expression associated with the development of prostate cell proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="chemically treated genomic DNA (Homo saplens)"
Lofton-Day, C., Sledziewski, A., Thomas, J., Day, R.W.,
Tonnes-Priddy, L. and Cardon, K.
Methods and nucleic acids for the analysis of colorectal cell
proliferative disorders
Patent: WO 2005001142-A 206 06-JAN-2005;
Epigenomics AG (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                Score 8.4; DB 1; Length 10;
Pred. No. 46;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 46; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            disorders
Patent: WO 2005054517-A 938 16-JUN-2005;

    .10
    /organism="synthetic construct"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CS114180 10 bp DNA
Sequence 938 from Patent W02005054517.
CS114180.1 GI:68225725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 699 from patent US 6825174. AR610577
                                                                                                                                                        1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Epigenomics AG (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR610577.1 GI:56666053
                                                                                                                                                                                                                                                                  52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 90...
9, Conservative
                                                                                                                                                                                                                                                                                                           9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 10)
```

8 g

PAT 20-FEB-2003

```
Affourtit,J.P., Nelson,D.L., Seymour,A.B. and Webb,S.M. Genetic polymorphisms in the human neurokinin 1 receptor gene and their uses in diagnosis and treatment of diseases Patent: EP 1262555-A 4 (US) Pfizer Products Inc. (US)
                                                                                                                                                                                                      Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Buarchontoglires, Primates, Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sledziewski, A. and Schweikhardt, R.G. Method for the analysis of cytosine methylation patterns Patent: WO 03064701-A 27 07-AUG-2003; Epigenomics AG (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                       52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 46; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 46; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A12950 11 bp DNA linear Nucleotide seguence 7 from patent number EP0320866.
A12950
                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .10
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="teaxon:32630"
/note="AP-PCR Primer G6"
                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 bp 1 Sequence 27 from Patent WO03064701.
                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
                                                                                            AX616443 10 bp Sequence 4 from Patent EP1262565.
                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                         AX616443.1 GI:28447486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX814781.1 GI:39103975
                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 90.v-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9; Conservative
                                                                                                                                                                                                                                       Hominidae; Homo.
 3 GCGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 CGGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GCGGACGCCA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGGGCGGGAT 1
                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
                                                                                                                              X616443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                            DEFINITION
                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 57
AX814781/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 58
A12950/c
LOCUS
                                                               RESULT 56
AX616443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                       KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                            LOCUS
                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유
                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                    PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nyce,J.W.
Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 773 30-NOV-2004;
East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                       Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 719 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                          52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 46; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 8.4; DB 1; Length 10;
Pred. No. 46;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
Bast Carolina University; Greenville, NC
Location/Qualifiers
1. . 10
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 773 from patent US 6825174.
AR610651.
AR610651.1 GI:56666127
                                                                                                                                                                                                                                                             Sequence 719 from patent US 6825174. AR610597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 52.5%; Score 8.4; DE Best Local Similarity 90.0%; Pred. No. 46; Matches 9; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                               /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                               AR610597.1 GI:56666073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52.5%;
90.0%;
                                                                           Ouery Match
Best Local Similarity 90.0-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 10)
                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 10)
                                                                                                                                                                           1 GGAGGCGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | |||||||||||||
1 GAGGCGGCA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 GCGGGCGCA 12
                                                                                                                                                       2 GGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6 GGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                             Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                          Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                                                                                                                                                                                                                                Unknown
                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                 Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 55
AR610651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
TITLE
                                                                                                                                                                                                                                   RESULT 54
AR610597
                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
```

g

δ

ö

Gaps

ö

PAT 05-DEC-2003

ö

Gaps

; 0

PAT 25-JAN-1994

Page 15

```
Unknown.
Unclassified.
1 (bases 1 to 11)
Botstein,D.A., Cohen,R.L., Goddard,A.D., Gurney,A.L., Hillan,K.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Petersohn, D., Schlotmann, K., Gassenmeier, T., Holtkoetter, O., Conradt, M. and Hofmann, K.
Method for determining markers of human facial skin
Patent: WO 2004059001-A 2004 15-JUL-2004;
Henkel Kommanditgesellschaft auf Aktien (DE)
                                                                                                                                                                                                                                                                                 Score 8.4; DB 1; Length 11;
Pred. No. 52;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels

    .11
        \langle organism="synthetic construct" \(\text{mol} \text{ type="genomic DNA"}\) \(\text{db_xref="taxon:32630"}\)

                                                                                                                                                                                                                                                                                                                                                                                                                                           CQ836946 11 bp DNA
Sequence 2004 from Patent WO2004059001.
CQ836946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .11
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 bp D
Sequence 44 from patent US 6387657.
AR210343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 8.4; D
Pred. No. 52;
                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CQ836946.1 GI:50836480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR210343.1 GI:21512549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52.5%;
                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 90.0%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 90.0
المالية 9
                                                                                                                                                                                                                                                                                                                                           1 CGGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                      ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 GGCAGGCGC 1
                                                                                                                                                                                                                                                                                                                                                                      11 cggAgggcgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ධප්‍රධාප්‍රධා
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 61
CQ836946/c
LOCUS
                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR210343/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                              PAT 18-JAN-1994
                                                                     1 (bases 1 to 11)
Barcoloni,A., Pizza,M. and Rappuoli,R.
A protective immunodominant epitope included in the S1 subunit of pertussis toxin
Patent: EP 0320866-A 7 21-JUN-1989;
                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                Score 8.4; DB 1; Length 11; Pred. No. 52; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 8.4; DB 1; Length 11;
Pred. No. 52;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                          Al3329 11 bp DNA linear Modified DNA for pertussis toxin (S1, AA 910-920). Al3329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
synthetic construct
other sequences, artificial sequences.
1 (bases 1 to 11)
Pizza,M., Rappuoli,R. and Bartoloni,A.
Bordetella pertussis toxin with altered toxicity
Patent: EP 0322533-A 9 05-JUL-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
other sequences; artificial sequences.
leavine, A.J. and Pennica, D.
WNT-1 induction gene
Patent: JP 2001520885-A 22 06-NOV-2001;
GENEWTECH INC
OS Artificial Sequence
PN JP 2001520885-A/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                     /mol_type="unassigned DNA"
/db_xref="taxon:32644"
                                                                                                                                                                                      organism="unidentified"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11 bp
                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                           unidentified
unidentified
unclassified sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD087712.1 GI:22633322
JP 2001520885-A/22.
                                                                                                                                                                                                                                            52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WNT-1 induction gene. BD087712
   GI:489565
                                                                                                                                                                                                                                                                                                                                                                                                                                                       A13329.1 GI:489614
                                                                                                                                                                                                                                            Query Match
Best Local Similarity 90.0
Matches 9, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9; Conservative
                                                                                                                                                                                                                                                                                                       7 GCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7 GCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11 GCGGCTTCGT 2
                                                                                                                                                                                                                                                                                                                         11 GCGCCTTCGT
                                                                                                                                             SCLAVO S.p.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 9; Conserv
 A12950.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BD087712
                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BD087712/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                               RESULT 59
                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REPERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 60
                                                                                                                                                                                                                                                                                                                                                                                              A13329/c
                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
```

ö

Gapa

ö

ઠે 셤 PAT 29-JUL-2004

linear

ö

Gaps

ö

g È

PAT 20-JUN-2002

linear

```
AR452741.1 GI:42684714
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR563499
AR563499.1 GI:53978545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR610555.1 GI:56666031
                                                                                                                                                                                                                                                                                            52.5%;
90.0%;
                                                                                                                                                                                                                                                                                          Query Match 52.5
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
Unclassified.
1 (bases 1 to 11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9; Conservative
                                                                                                                                                                                                                                                                                                                                              1 CGGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 096096609 10
                                                                                                                                                                                                                                                                                                                                                             11 CGGAGGGCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11 CGGAGGCGG 2
                                                                                                                                        Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                    AR563499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unknown.
                                                                                                                 Jnknown
                                                                                                                              Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR610555
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                          RESULT 65
AR452741/c
LOCUS
                                                           DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                      AR563499/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                            ORGANISM
                                                                                                                                                 REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 67
                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                               FEATURES
                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                              ö
                                                                                                                                                                                                                                           PAT 18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 18-DEC-2003
Lawrence, D.A., Levine, A.J., Pennica, D., Roy, M.Ann. and Wood, W.I. WISP polypeptides and nucleic acids encoding same Patent: US 6387657-A 44 14-MAY-2002; Location/Qualifiers
                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
0
                                                                                                  Score 8.4; DB 1; Length 11;
Pred. No. 52;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 52; 1; Indels 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 52; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                    Sorge, J.A.
Sorge, J.A.
Collections of uniquely tagged molecules
Patent: US 6607878-A 79 19-AUG-2003;
Stratagene; La Jolla, CA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Guarriate-binding protein
Patent: US 6642024-A 23 04-NOV-2003;
Genentech Inc.; South San Francisco, CA
Location/Qualifiers
                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                        11 bp | Sequence 79 from patent US 6607878.
AR379421
                                                            /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 23 from patent US 6642024.
                                                                                                                                                                                                                                                                                                                                                                                                                       1. .11
/organism="unknown"
/wol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .11
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                AR379421.1 GI:40087055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR428591
AR428591.1 GI:40188232
                                                                                                  Query Match
Best Local Similarity 90.0%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                  Unknown.
Unclassified.
1 (bases 1 to 11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 52.5
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ceeceecee 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CGGCGGGCGG 10
                                                                                                                                                    1 CGGCGGCGG 10
                                                                                                                                                                   11 CGGAGGCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ||| |||||
11 CGGAGGGCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 CGGAGGGCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pennica, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR428591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 64
AR428591/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                              AR379421/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                            셤
                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
   PAT 20-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 08-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 11)
Nezu,J.-i. and Oku,A.
Transporter polypeptide and method of producing same Patent: US 6759514-A 32 06-JUL-2004;
Dingai Seiyaku Kabushiki Kaisha; Tokyo;
                                                                                                                                                                                                                                                                                                                                  Score 8.4; DB 1; Length 11;
Pred. No. 52;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 52; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR610555 11 bp DN
Sequence 677 from patent US 6825174.
AR610555
                                                                                                                                         1 (bases 1 to 11)
Nezu,J.-i. and Oku,A.
Serine-threonine kinase gene
Patent: US 6677437-A 41 13-JAN-2004;
Chugai Seiyaku Kabushiki Kaisha;;
JPX;
Sequence 41 from patent US 6677437.
AR452741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 32 from patent US 6759514.
                                                                                                                                                                                                                                                                    1. .11
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .11
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
```

Gapa ö PAT 21-FEB-2003

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 52; tive 0; Mismatches 1; Indels
                         52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 59; tive 0; Mismatches 1; Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                 linear
                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                  Petersohn, D., Conradt, M. and Hofmann, K. Method for determining homeostasis of the skin Patent: WO 02053774-A 5908 11-JUL-2002; Henkel Kommanditgesellschaft auf Aktien (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                      AX628867
Sequence 5908 from Patent WO02053774.
AX628867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 (Dages 1 to 12)
Baxter-Lowe, L. Ann.
Method for HLA Typing
Patent: US 554526-A 23 13-AUG-1996;
Location/Qualifiers
                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124595
Sequence 23 from patent US 5545526.
124595
124595.1 GI:1604465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .12
/organism="unknown"
                                                                                                                                                                                                                                           AX628867.1 GI:28456905
                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ouery Match
Best Local Similarity 90...
9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 90.0.
Best Local 9; Conservative
                         Query Match 52.5
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                       1 CGGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGCGGGCGG 10
                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CGGCAGGCGG 12
                                                                                                                  11 cggAgggcgg
                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 GGCAGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          136123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -
                                                                                                                                                                              AX628867/c
LOCUS
                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 72
136123/c
LOCUS
                                                                                                                                                                 RESULT 70
                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 71
                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124595
                                                                                       à
                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                      PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 10-JAN-2003
Nyce,J.W.

Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 677 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation.
Patent: US 6825174.A 772 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1...11
/organism="synthetic construct"
/molypp="unassigned DNA"
/molype="unassigned"
/molype="taxon:32630"
/noTe="this is the sequence of chemically synthesized
                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Puurand, U.
Method for the detection of dna sequence variations
Patent: WO 02072877-A 4 19-SEP-2002;
University of Tartu (EE)
Location/Qualifiers
                                                                                                                                                                              DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 52; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  other sequences; artificial sequences
                                                                                                                                                                         52.5%; Score 8.4; DB 90.0%; Pred. No. 52; live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                 AR610650 11 bp DN
Sequence 772 from patent US 6825174.
AR610650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX583616 11 bp 28cguence 4 from Patent W002072877. AX583616 GI:27655426
                                                                                                               1. .11
/organism="unknown"
/mol_type="genomic DNA"

    11
    /organism="unknown"
    /mol_type="genomic DNA"

                                                                                                                                                                                                                                                                                                                                                                                              AR610650.1 GI:56666126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
Unclassified.
1 (bases 1 to 11)
                                                                                                                                                                       Query Match
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9; Conservative
                                                                                                                                                                                                                                                          2 GGAGGCCGC 11
                                                                                                                                                                                                                                      2 GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 GCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGCGCCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oligo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 69
AX583616/c
                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
    AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                    RESULT 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                    AR610650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
```

ö

Gaps

ö

PAT 07-0CT-1996

ö

Gaps

; 0

PAT 13-MAY-1997

Wed May 10 10:49:50 2006

```
Score 8.4; DB
Pred. No. 59;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                       /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .12
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR610649.1 GI:56666125
                                                                                                                                                                                                           AR610532.1 GI:56666008
              52.5%;
90.0%;
 Query Match
Best Local Similarity 90.vv,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
Unclassified.
1 (bases 1 to 12)
                                                                                                                                                                                                                                                                             (bases 1 to 12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 52.5
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCGGCATGG 10
                                                                      6 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 GGAGGCCGC 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 GGCGGCATCG 15
                                                                                             12 GGCGGTATCG 3
                                                                                                                                                                                                                                                                Inclassified.
                                                                                                                                                                                                                                                                                             Nyce, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nyce, J.W
                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                      Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
TITLE
                                                                                                                                       RESULT 75
AR610532
                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 77
                                                                                                                                                                                                           VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR610649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                        δ
                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                           PAT 20-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 25-SEP-2002
                                                                                             1 (bases 1 to 12)
Wadsworth, S., Snyder, B., Reddy, V.B. and Wei, C.
cDNA-genomic DNA hybrid sequence encoding APP770 containing a
genomic DNA insert of the KI and OX-2 regions
Patent: US 5604131-A 5 18-FEB-1997;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                     Query Match 52.5%; Score 8.4; DB 1; Length 12; Best Local Similarity 90.0%; Pred. No. 59; Matches 9; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 52.5%; Score 8.4; DB 1; Length 12; Best Local Similarity 90.0%; Pred. No. 59; Matches 9; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 12)
Schroth, G.P., Bruice, T.W. and Suh, Y.J.
Nucleic acid ligand interaction assays
Patent: US 6420109-A 30 16-UUL-2002;
Genelabs Technologies, Inc.; Redwood City,
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases 1 to 12)
Schroth (G.P., Bruice, T. Wayne. and Suh, Y.J.
Nucleic acid ligand interaction assays
Patent: US 6355428-A 30 12-MAR-2002;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .12
/organism="unknown"
/mol_type="unassigned DNA"

    .12
    /organism="unknown"
    /mol_type="unassigned DNA"

                                                                                                                                                                                                                                                                                                                                                                                       Sequence 30 from patent US 6355428.
AR199321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR218371 12 bp
Sequence 30 from patent US 6420109.
AR218371.1 GI:23319068
  Sequence 5 from patent US 5604131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                  AR199321.1 GI:20249395
              I36123
I36123.1 GI:2087347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 GGCGCCATCG 15
                                                                                                                                                                                                                                                                                            4 CGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                10 CGGCCAGCAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12 GGCGGTATCG 3
                                                                     Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                      Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
VERSION
                                                     SOURCE
ORGANISM
                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                           AR199321/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR218371/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                    JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                            AUTHORS
TITLE
                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 74
                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                           VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

ö ö ó PAT 15-DEC-2004 PAT 15-DEC-2004 Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: 105 6825174-A 771 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 654 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers Gaps Gaps Gaps ö .. 0 ö DB 1; Length 12; DB 1; Length 12; DB 1; Length 12 linear 1; Indels Indels 1; Indels linear DNA Sequence 654 from patent US 6825174. 12 bp DN Sequence 771 from patent US 6825174. AR610649 52.5%; Score 8.4; DB 90.0%; Pred. No. 59; iive 0; Mismatches 52.5%; Score 8.4; DE 90.0%; Pred. No. 59; Live 0; Mismatches

```
Homo sapiens (human)
JP 2002534056-A/1242
15-OCT-2002
                                                         BD161401.1 GI:27867159
JP 2002186482-A/223.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BD239824.1 GI:33049594 JP 2002534056-A/1242. Homo sapiens (human) Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10 CGGCGGGC 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CGGCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PP PR
                 LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
     BD161401/c
                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 80
BD239824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                          REFERENCE
                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                 PAT 07-SEP-2000
                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P53-induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Mammalia; Butheria; Buarchontoglires; Primates; Catarrhini; Hominidae, Homo.

1 (bases 1 to 10)
Vogelstein,B., Kinzler,K.W. and Polyak,K.
Patent: JP 2001523441-12 27-NOV-2001;
THE JOHNS HOPKINS UNIVERSITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OS HOMO Sapiens (Unuman)

PN JP 2001523441-A/12

PD 27-NOV-2001

PP 17-SEP-1999 JP 2000511894

PR 17-SEP-1997 US 60/059153,30-MAR-1998 US 60/079817 PI

BERTY VOCELSTEIN, KENNETH W KINZLER, KORNELIA POLYAK PC

C1201/68,CO7K16/32,C12P21/08//C12N15/09,C12N15/00 CC P53-induc. Apoptosis

FM Key Location/Qualifiers

FT source L..10

/organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ce 1. .10
/organism='Homo sapiens (human)'
Location/Qualifiers
                 linear
                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                    Chernajovsky,Y. and Annenkov,A.
Immune modulation by polypeptides related to crl
Patent: WO 9845430-A 4 15-OCT-1998;
CHERNAJOVSKY YUTI (GB); ANNENKOV ALEX (GB)
Location/Qualifiers
                                                                                                                                                                                                                                                                                 Length 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .;
0
                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50.0%; Score 8; DB 1;
100.0%; Pred. No. 57;
iive 0; Mismatches
                                                                                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                            50.0%; Score 8; DB 1
100.0%; Pred. No. 57;
ive 0; Mismatches
                                                                                                                                                                                                                       /organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"
             10 bp
Sequence 4 from Patent WO9845430.
A84635.
A84635.1 GI:6733549

    .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                               unidentified
unidentified
unclassified sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD091134.1 GI:22636744 JP 2001523441-A/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                    BD091134
P53-induced apoptosis.
BD091134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                               Ouery Match
Best Local Similarity ا00.۰
اوند B; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8; Conservative
                                                                                                                                                                                                                                                                                                                                   4 CGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                     1 CGGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
Matches 8; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                       DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                      BD091134/c
                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 78
A84635/c
                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                     Locus
                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
```

RESULT 79

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Buarchontoglires; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 10)

S Nagai,S., Matsushima,K. and Hashimoto,S.
Human activated Th1 and Th2 cell expression genes
Patent: JP 200186482-A.23 02-JUL-2002;
JAPAN SCIENCE AND TECHNOLOGY CORP
OS Homo sapiens (human)
PN JP 200216482-A/23
PD 02-JUL-2002
PF 19-DEC-2000 JP 2000385816
PI SHIGENORI NAGAI,KOJI MATSUSHIMA,SHINICHI HASHIMOTO PC
C12N15/09,CO7K14/47,CO7K16/18,C12P21/08,C12N15/00 CC
C12N15/09,CO7K14/47,CO7K16/18,C12P21/08,C12N15/09
Location/Qualifiers

Location/Qualifiers

Location/Qualifiers

/organism='Homo sapiens (human)'.
                         PAT 17-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089853 PR
60/080079 PR
60/080072 PR
60/080991 PR
60/080048 PR
60/090048 PR
60/090048 PR
60/08043 PR
60/089844 PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ice 1. .10
/organism='Homo sapiens (human)'
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
10 bp DNA linear Human activated Thl and Th2 cell expression genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 60/090039,19-JUN-1998 US 60/090041,19-JUN-1998 US 60/080997,19-JUN-1998 US 60/08992,19-JUN-1998 US 60/08992,19-JUN-1998 US 60/08999,19-JUN-1998 US 60/08999,19-JUN-1998 US 60/080942,19-JUN-1998 US 60/090044,19-JUN-1998 US 60/090044,19-JUN-1998 US 60/090044,19-JUN-1998 US 60/090044,19-JUN-1998 US 60/090080,19-JUN-1998 US 60/090080,19-JUN-1998 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10 bp DNA
Preparation and use of superior vaccines.
BD239824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hominidae, Homo.

1 (bases 1 to 10)

Roberts, B.L. and Shankara, S.

Preparation and use of superior vaccines
Patent: JP 2002514056-A 1242 15-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50.0%; Score 8; DB 1;
100.0%; Pred. No. 57;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JUN-1999 JP 2000554749
19-JUN-1998 US 60/09003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-7UN-1998 (19-7UN-1998 (19-7U
```

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 83
AR222959/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E54841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ..998 ()

4.1998 US

60/0895.

UN-1998 US

60/08978.L.

JUN-1998 US

60/090000,19-JUN.

49-JUN-1998 US

60/090042,19-JUN-1998 US

19-JUN-1998 US

60/090041.9-JUN-1998 US

60/090041.9-JUN-1998 US

60/090078,19-JUN-1998 US

60/0
                                                                                                                                                                В
                                                                                                                                                                                                                         PC C12N1/21,C12N5/10,G01N33/15,G01N33/50,G01N33/53,G01N33/56, PC G01N37/00,
PC C12N15/00,C12N5/00,C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                           BRUCE L ROBERTS, SRINIVAS SHANKARA
C12N15/09, C12N15/09, A61K39/00, A61P35/00, A61P37/04, C12N1/15,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090040 PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
   60/090077 PR
60/090047 PR
60/090045 PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/089853 PR
60/080079 PR
60/080079 PR
60/080991 PR
60/080048 PR
60/080043 PR
60/08043 PR
60/08043 PR
60/080037 PR
60/080077 PR
60/080047 PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                          /organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US 60/090039,19-JUN-1998 US 60/090031,19-JUN-1998 US 60/08995,19-JUN-1998 US 60/08992,19-JUN-1998 US 60/08992,19-JUN-1998 US 60/08999,19-JUN-1998 US 60/08999,19-JUN-1998 US 60/090042,19-JUN-1998 US 60/090080,19-JUN-1998 US 60/090080,19-JUN-1998 US 60/090098,19-JUN-1998 US 60/090098,19-JUN-1998 US 60/090098,19-JUN-1998 US 60/090098,19-JUN-1998 US 60/090076,19-JUN-1998 U
                                                                                                                                                                                                                                                                                                                      Preparation and use of superior vaccines
Key
   60/089994,19-JUN-1998 US
60/090078,19-JUN-1998 US
60/090076,19-JUN-1998 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10\ \mathrm{bp} DNA Preparation and use of superior vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hominidae, Homo.

1 (bases 1 to 10)

Roberts, B.L. and Shankara, S.

Preparation and use of superior vaccines
Patent: JP 2002534056-A 1653 15-OCT-2002,
GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50.0%; Score 8; DB 1;
100.0%; Pred. No. 57;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
JP 2002534056-A/1653
15-OCT-2000
18-JUN-1999 US 60/090039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD240235
BD240235.1 GI:33050005
JP 2002534056-A/1653.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8; Conservative
19-JUN-1998 US
19-JUN-1998 US
19-JUN-1998 US
08-DEC-1998 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GCCGGCC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OS Homo sag
PN JP 2002E
PD 15-OCT-2
PF 18-JUN-1
PR 19-JUN-1998 L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                              C12N1/19,
                                                                                                                                  PC
                                                                                                                                                                                                                                                                                            22555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 81
BD240235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
```

ò

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 26-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae; Homo.

1. (hasse; Homo.

2. I (hasse Homo.

3. Matsushima.K., Hashimoto,S., Kaneko,S. and Yamashita,T.

4. Human normal liver cell expression genes

4. Patent: JP 2010121883-A 193 07-AUG-2001;

5. SCIENCE & TECH AGENCY

6. Homo sapiens (human)

7. Py 201211883-A/193

8. Py 07-AUG-2001

8. The same sapiens (human)

8. The same sapiens (human)

8. The same sapiens (human)

9. The s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PI
                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleo
Mammalia, Eutheria, Euarchontoglires, Primates, Catarhini,
                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
              /organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 10;
                                                                                                                                                                                                                                                                            Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           To (bases 1 to 10)
Polyak,K., Vogelstein,B. and Kinzler,K.W.
PS3-induced apoptosis
Patent: US 6432640-A 12 13-AUG-2002;
The Johns Hopkins University; Baltimore, MD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C12N15/09, C07K16/18, C12P21/02, C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E54841 10 bp DNA Human normal liver cell expression genes. E54841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50.0%; Score 8; DB 1;
100.0%; Pred. No. 57;
ive 0; Mismatches
                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                    50.0%; Score 8; DB 1
100.0%; Pred. No. 57;
stive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 bp
Sequence 12 from patent US 6432640.
AR222959
AR222959.1 GI:23330797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

    .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1. .10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E54841.1 GI:22556324
JP 2001211883-A/193.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100..
                                                                                                                                                                                                                                                                                                                                             8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                  GGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GCCATCGT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown.
FF
                                                                                                                                                                                                                                                                                                                                                                                                                  σ
```

PAT 17-AUG-2003

FEATURES

RESULT 84

ઠે 셤 AR351643

JOURNAL

PEATURES

```
Unclassified.
Unclassified.
1 (bases 1 to 10)
Dobrindt, D. and Fischer, U.
Device for generating an offset of transported flexible sheet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unclassified.

1 (bases 1 to 10)

Dobrindt, D. and Fischer, U.

Device for generating an offset of transported flexible sheet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                  Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
                                                                                            AR351879 10 bp DNA
Sequence 1688 from patent US 6588746.
AR351879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                           material
Patent: US 6588746-A 1688 08-JUL-2003;
NexPress Solutions LLC; Rochester, NY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent: US 6588746-A 1689 08-JUL-2003;
Nexbress Solutions LLC; Rochester, NY;
DEX;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 50.0%; Score 8; DB 1; Best Local Similarity 100.0%; Pred. No. 57; Matches 8; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1689 from patent US 6588746.
                                                                                                                                                                                                                                                                                                                                                                                               50.0%; Score 8; DB 1
100.0%; Pred. No. 57;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR534351 10 bp
Sequence 1 from patent US 6733996.
AR534351 GI:53924543
                                                                                                                                                                                                                                                                                                                                      1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                       AR351879.1 GI:33753675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR351880.1 GI:33753676
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 CGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 CGGCCGC 11
   ||||||||
1 GCGGGCGG 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CGGGCGGC 8
                                                                                                                                                                     Unknown.
                                                                                                                                                                                    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    material
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 88
AR534351/c
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                   ORGANISM
                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                          JOURNAL
                                                               RESULT 86
                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR351880
LOCUS
                                                                               AR351879
                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                         ö
                                                                                                                                                                                                                                                           PAT 17-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 17-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 10)
Dobrindt, D. and Fischer, U.
Device for generating an offset of transported flexible sheet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Device for generating an offset of transported flexible sheet material
                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                        Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 50.0%; Score 8; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 57; Matches 8; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 10;
                                                                                     Query Match
50.0%; Score 8; DB 1;
Best Local Similarity 100.0%; Pred. No. 57;
Matches 8; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 50.0%; Score 8; DB 1;
Best Local Similarity 100.0%; Pred. No. 57;
Matches 8; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent: US 6588746-A 1277 08-JUL-2003;
NexPress Solutions LLC; Rochester, NY;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent: US 6588746-A 101 08-JUL-2003;
NexPress Solutions LLC; Rochester, NY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR351735 10 bp DNJ Sequence 1277 from patent US 6588746.
                                                                                                                                                                                                                                                      AR351643 10 bp DN
Sequence 101 from patent US 6588746.
AR351643.
AR351643.1 GI:33753439
                                                         /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .10
/organism="unknown"
/wol_type="genomic DNA"
              Location/Qualifiers
                                             /organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unclassified.
1 (bases 1 to 10)
Dobrindt, D. and Fischer, U.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR351735
AR351735.1 GI:33753531
                                                                                                                                                                                                                                                                                                                                                Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 GCGGGCGG 10
                                                                                                                                                 1 CGGCGGGC 8
                                                                                                                                                                     9 CGGCGGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GCGGCCGG 8
                                                                                                                                                                                                                                                                                                                               Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                          material
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
WOX;
                                                                                                                                                                                                                                                    LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
```

ö

Gaps

ö

PAT 17-AUG-2003

ö

Gaps

ö

REFERENCE AUTHORS

TITLE

JOURNAL

FEATURES

ò

RESULT 85

g

ò

AR351735 LOCUS

PAT 08-OCT-2004

```
1 CGGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                           Query Match
                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX224414/c
                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                  TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                      Matches
                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 92
                                                                                                                                                                      RESULT 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                    AX152715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                       VERSION
                                                                                                                          g
                                                                                                   ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                           PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .;
0
                        Tobases 1 to 10)
Froehlich, A.C., Loros, J. and Dunlap, J.C.
Methods for regularing gene expression using light
Patent: US 673396-A 1 11-MAY-2004;
Trustees of Dartmouth College; Hanover, NH
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                               0; Indels
                                                                                                                                                                      Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Velculescu, V.E., Vogelstein, B. and Kinzler, K.W. Human transcriptomes
Patent: WO 0138577-A 628 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Velculescu, V.E., Vogelstein, B. and Kinzler, K.W. Human transcriptomes
Patent: WO 0138577-A 629 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
1. .10
                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                   50.0%; Score 8; DB 1; 100.0%; Pred. No. 57; iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 50.0%; Score 8; DB 1, Best Local Similarity 100.0%; Pred. No. 57; Matches 8; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX152714 10 bp D
Sequence 629 from Patent WO0138577.
AX152714
                                                                                                                                                                                                                                                                                                         AX152713 10 bp 1
Sequence 628 from Patent WO0138577.
AX152713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                       /mol_type="genomic DNA"
                                                                                                           1. .10
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX152714.1 GI:14534365
                                                                                                                                                                                                                                                                                                                                                                AX152713.1 GI:14534364
                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                      Query Match
Best Local Similarity 100.v
---a 8; Conservative
                                                                                                                                                                                                                         7 GCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GGCGGGCG 10
              Unclassified.
                                                                                                                                                                                                                                            9 GCGGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
 Unknown
                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                    JOURNAL
                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                           REFERENCE
                                                                                                                                                                                                                                                                                             RESULT 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX152714
LOCUS
                                                                                                                                                                                                                                                                                                            AX152713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                  PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 10-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Albertsen,M.C., Fox,T.W., Garnaat,C.W., Huffman,G. and Kendall,T.L. Male tissue-preferred regulatory region and method of using same Patent: WO 0160997-A 21 23-AUG-2001; PIONEER HI-BRED INTERNATIONAL, INC. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Zea.
                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 10;
                                                                           Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Velculescu, V.E., Vogelstein, B. and Kinzler, K.W.
                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50.0%; Score 8; DB 1;
100.0%; Pred. No. 57;
Itive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50.0%; Score 8; DB 1;
100.0%; Pred. No. 57;
vative 0; Mismatches
                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human transcriptomes
Patent: WO 0138577-A 630 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                        50.0%; Score 8; DB 1.larity 100.0%; Pred. No. 57; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                              AX152715 10 bp | L
Sequence 630 from Patent WO0138577.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Zea mays"
/mol_type="unassigned DNA"
/db_xref="taxon:4577"
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 21 from Patent WO0160997. AX224414.1 GI:15554654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                      AX152715.1 GI:14534366
                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GCCGGCC 10
                                                                                                                                                                                      3 GCCGCCC 10
                                                                                                                                                   6 50555055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6 50555055
                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                             Local Similarity
nes 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
```

Gaps

ö

PAT 26-MAR-2003

ö

Gaps

ö

PAT 26-MAR-2003

g

셤

```
Liu,Q.
Position dependent recognition of gnn nucleotide triplets by zinc fingers
Patent: WO 0242459-A 1277 30-MAY-2002;
Sangamo Biosciences Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Liu,Q.
Position dependent recognition of gnn nucleotide triplets by zinc fingers
Patent: WO 0242459-A 1688 30-MAY-2002;
Sangamo Biosciences Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Liu.Q.

Description dependent recognition of gnn nucleotide triplets by zinc fingers

Patent: WO 0242459-A 1689 30-MAY-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                            Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1..10
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="example target DNA"
                                                                                                                                                                 1. .10
/organism="synthetic construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                           50.0%; Score 8; DB 1;
100.0%; Pred. No. 57;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50.0%; Score 8; DB 1;
100.0%; Pred. No. 57;
Itive 0; Mismatches
                                            other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                              AX668239 10 bp DN
Sequence 1688 from Patent WO0242459.
AX668239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1689 from Patent WO0242459.
                                                                                                                                                                                             /mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="example target DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX668239.1 GI:29291518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX668240.1 GI:29291519
               synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 50.0
Best Local Similarity 100.
Matches 8; Conservative
                                                                                                                                                                                                                                                                                         8; Conservative
                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 8; Conservat
                                                                                                                                                                                                                                                                                                                     GCGGCCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 CGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                  1 GCGGGCGG 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CGGGCGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
KEYWORDS
                            ORGANISM
                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 96
                                                                                                                                                                                                                                                                                                                                                                                                            AX668239
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX668240
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 97
KEYWORDS
                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                      PAT 03-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 26-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 26-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Liu,O.
Position dependent recognition of gnn nucleotide triplets by zinc
                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                to SEQ ID NO:
                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 50.0%; Score 8; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 57; Matches 8; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                              Length 10;
                                                                                                                                                                                                                  Weller, D.D. and Reddy, T.M.
Method for analysis of oligonucleotide analogs
Patent: WO 0218656-A 9 07-MAR-2002;
Avi Biopharma, Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                /organism="synthetic construct"
|mol_type="unassigned DNA"
|db_xref="taxon:32630"
|noTe="fragment of complement to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/noTe="example target DNA"
                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                           Similarity 100.0%; Score 8; DB 1; Similarity 100.0%; Pred. No. 57; 8; Conservative 0; Mismatches
                                                                                                                                                                                        other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fingers
Patent: WO 0242459-A 101 30-MAY-2002;
Sangamo Biosciences Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX667828 1277 from Patent W00242459. AX667828 AX667828. AX667828.1 GI:29291365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 101 from Patent WO0242459.
                                                                               Sequence 9 from Patent W00218656.
                                                                                                                            AX451293.1 GI:21698346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX666652.1 GI:29291120
                                                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                        9 GGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 GGCATCGT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 ccccccc 8
                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                           DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                    RESULT 93
AX451293/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 94
AX666652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX667828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
```

셤

ò

```
DB 1;
5. 64;
Query Match 50.0%; Score 8; DB 1;
Best Local Similarity 100.0%; Pred. No. 64;
Matches 8; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                  Sequence 6741 from Patent WO02053774. AX629700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX631443 11 bp DN.
Sequence 8485 from Patent WO02053774.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 100.0%; Score 8; DB 1 Similarity 100.0%; Pred. No. 64; 8; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50.0%; Score 8; DB 1
llarity 100.0%; Pred. No. 64;
Conservative 0; Mismatches

    .11
    /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                            1. .11
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                    AX629700.1 GI:28457738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX631443.1 GI:28459509
                                                                                                                                                                                                                                                Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                               Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hominidae; Homo
                                                                                  GGCGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GGCGGGCG 10
                                                             2 GGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ceeceeec 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 cádcadác 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                       AX629700/c
LOCUS
                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                          RESULT 100
                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                   KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX631443
                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                               PAT 29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 21-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Petersohn, D., Schlotmann, K., Gassenmeier, T., Holtkoetter, O., Conradt, M. and Hofmann, K.
Method for determining markers of human facial skin Patent: WO 2004059001-A 2940 15-UUL-2004;
Henkel Kommanditgesellschaft auf Aktien (DE)
Location/Qualifiers
                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                           Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Petersohn, D., Conradt, M. and Hofmann, K. Method for determining homeostasis of the skin Patent: WO 02053774-A 1063 11-JUL-2002; Henkel Kommanditgeeellschaft auf Aktien (DE) Location/Qualifiers
                           1. 10
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="example target DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11 bp DNA
Sequence 1063 from Patent W002053774.
AX624022
                                                                                                                                                                                                                                                                                             CQ837882 11 bp DNA Sequence 2940 from Patent WO2004059001.
CQ837882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.0%; Score 8; DB 1;
100.0%; Pred. No. 64;
iive 0; Mismatches
                                                                                                                        DB 1;
                                                                                                                      h Similarity 100.0%; Score 8; DB 1; Similarity 100.0%; Pred. No. 57; 8; Conservative 0; Mismatches

    .11
    /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .11
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
Sangamo Biosciences Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                           CQ837882.1 GI:50837416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX624022.1 GI:28451963
                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae; Homo.
                                                                                                                                                                                     4 CGGGCGGC 11
                                                                                                                                                                                                       1 CGGGCGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CGGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9 CGGCGGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                  RESULT 98
CQ837882/c
                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 99
AX624022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                 LOCUS
                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                     ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                   PAT 21-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 21-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                           Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Buarchontoglires, Primates, Catarrhini,
                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
0
                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Petersohn, D., Conradt, M. and Hofmann, K. Method for determining homeostasis of the skin Patent: WO 02053774-A 6741 11-JUL-2002; Henkel Kommanditgesellschaft auf Aktien (DE) Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Petersohn, D., Conradt, M. and Hofmann, K.
Method for determining homeostasis of the skin
Patent: WO 02053774-A 8485 11-JUL-2002;
Henkel Kommanditgesellschaft auf Aktien (DE)
```

25

Page

ö

Gapa

ö

PAT 29-JUL-2004

linear

ö

Gaps

.. 0

PAT 27-APR-1998

JOURNAL

PEATURES

ઠે 셤

```
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Buarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 11)
Tahira,K., Nishikawa,S., Yamada,A. and Hanada,K.
Pahr OF Miniribozyme, Miniribozyme-Dimer, Cutting-Deactivation of
Target rna by Them and Medicins
                                                                                                          Petersohn, D., Schlotmann, K., Gassenmeier, T., Holtkoetter, O., Conradt, M. and Hofmann, K.
Method for determining the homeostasis of hairy skin Patent: WO 2004059002-A 1201 15-JUL-2004;
Patent Kommandicesellschaft auf Aktien (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Petersohn, D., Schlotmann, K., Gassenmeier, T., Holtkoetter, O., Conradt, M. and Hofmann, K.
Method for determining markers of human facial skin Patent: WO 2004059001-A 619 15-JUL-2004;
Henkel Kommanditessellschaft auf Aktien (DB)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                              DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48.8%; Score 7.8; DB 1; Length 11; 81.8%; Pred. No. 72;
                                                                                                                                                                                                                                                                                                                                                                    2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CQ835561 11 bp DNA Sequence 619 from Patent WO2004059001. CQ835561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNA
                                                                                                                                                                                                                                                                                                                          h 48.8%; Score 7.8; DB Similarity 81.8%; Pred. No. 72; 9; Conservative 0; Mismatches
                                                                                                                                                                                                                                               /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CQ835561.1 GI:50835095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Substrate of minizyme. E13679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E13679.1 GI:5708690
JP 1997224673-A/7.
unidentified
unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81.8%;
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGCGGCA 12
                                                                           Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                           11 GGCGGGGGCCA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGCGGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGCCGGGGCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unclassified.
                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E13679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                 source
                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 106
E13679/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CQ835561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                    TITLE
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                   Biemans, R., Denoel, P., Feron, C., Goraj, K., Jennings, M.P., Poolnan, J. and Weynants, V. Vaccine composition

Vaccine composition

Vaccine Composition

Vaccine Composition

Vaccine Composition

Vaccine Composition

Vaccine Biologicals S.A. (BE); THE UNIVERSITY OF QUEENSLAND
                                   PAT 11-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi, Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Petersohn, D., Schlotmann, K., Gassenmeier, T., Holtkoetter, O., Conradt, M. and Hofmann, K. Method for determining the homeostasis of hairy skin Patent: WO 2004059002-A 104 15-JUL-2004; Henkel Kommandicpseallschaft auf Aktien (DE) Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match

48.8%; Score 7.8; DB 1; Length 11;
Best Local Similarity 81.8%; Pred. No. 72;
Matches 9; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 48.8%; Score 7.8; DB 1; Length 11; Best Local Similarity 81.8%; Pred. No. 72; Matches 9; Conservative 0; Mismatches 2; Indels
                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                        organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CQ833830 11 bp DNA
Sequence 1201 from Patent WO2004059002.
CQ833830 GI:50833437
                                                                                                                                                                other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 104 from Patent WO2004059002.
CQ832733
                                 CQ779064 11 bp D1
Sequence 8 from Patent WO2004015099.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .11
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                     CQ779064.1 GI:45381711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CQ832733.1 GI:50832340
                                                                                                                                                                                                                                                                                                                                                                                                                   /note="primer"
                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGCCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11 ééécééceece 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 ĠĠĠĠĠĠĊAĠĊĂ 1
                                           DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CO833830/c
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
         CQ779064/c
LOCUS'
                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CQ832733/c
                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 104
```

AUTHORS

REFERENCE

JOURNAL

TITLE

FEATURES

ò

JOURNAL

COMMENT

ö

Gaps

.

Indels

PAT 01-DEC-1998

linear

source

FEATURES

```
Wojnowski, L. and Hustert, E.
Polymorphisms in the human hpxr gene and their use in diagnostic and therapeutic applications
Patent: WO 0120026-A 98 22-MAR-2001;
Epidauros Biotechnologie AG (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                 Unclassified.

1 (bases 1 to 11)
Schaz, P.J., Cull, M.G., Miller, J.F., Stemmer, W. Peter. Christiaan.
and Gates, C.M.
Peptide library and screening method
Patent: US 5733731-A 77 31-MAR-1998;
       Unknow...
Unclassified.
1 (bases 1 to 11)
2 Schatz,P.J., Cull,M.G., Miller,J.F. and Stemmer,W.P.C. Schatz,P.J., Cull,M.G., Miller,J.F. and Stemmer,W.P.C. Pepride library and screening method patent: US 5498530-A 77 12-WAR-1996;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48.8%; Score 7.8; DB 1; Length 11;
                                                                                                                                                           DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     other sequences; artificial sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 7.8; DB
Pred. No. 72;
                                                                                                                                                                                                                                                                                                                  195620 11 bp C
Sequence 77 from patent US 5733731.
195620
                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .11
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                     1. .11
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                          Score 7.8; DI
Pred. No. 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 98 from Patent WO0120026. AX099035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX099035.1 GI:13538245
                                                                                                                                                       n 48.8%;
Similarity 81.8%;
9; Conservative C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48.8%;
                                                                                                                                                                                                                                                                                                                                                              GI:3940090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 81.87
                                                                                                                                                                                                                  GGCGGCATCGT 16
                                                                                                                                                                                                                                             1 ecceccacer 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCCACCGT 11
                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                              195620.1
    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 110
AX099035
                             REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                        RESULT 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                            d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 02-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 07-0CT-1996
                                                                                                                HANADA
                                                                                                                                             C12N15/09, A61K48/00, A61K48/00, A61K48/00, A61K49/00, C07H21/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
Unclassified.
11 (lbases 1 to 11)
Maugh,K.J., Anderson,D.M., Strausberg,S.L., Strausberg,R. and
                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
Patent: JP 1997224673-A 7 02-SEP-1997;
AGENCY OF IND SCIENCE & TECHNOL, HITACHI CHEM CO LTD, TAISHO
PHARMACEUT CO LTD
                                                     Artificial sequences.
JP 1997224673-A/7
2-SEP-1997
22-FEB-1996 JP 1996034898
TAHIRA KAZUWASA, NISHIKAWA SATOSHI, YAWADA AKIRA, PI
                                                                                                                                                                                                                                                                                                                                                                                                         ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                        'ce 1. .11
/organism='Artificial sequences'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ΒY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRODUCTION OF BIOADHESIVE PRECURSOR PROTEIN ANALOGS GENETICALLY-ENGINEERED ORGANISMS
Patent: WO 8807076-A 13 22-SEP-1988;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 7.8; DB 1; Length 11;
Pred. No. 72;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                      2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
                                                                                                                                                       C07H21/04,
C12N9/16,C12Q1/68//A01N63/00;
strandedness: Single;
topology: Linear;
hypothetical: No.
Key
                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11 bp
Sequence 13 from Patent WO 8807076.
108900
108900.1 GI:588373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="unknown"
/wol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 bp
Sequence 77 from patent US 5498530.
118784.1 GI:1599139
                                                                                                                                                                                                                                                                                                                                                                                         72;

    ..11
    /organism="unidentified"
/mol_type="genomic RNA"
/db_xref="taxon:32644"

                                                                                                                                                                                                                                                                                                                                                                          Score 7.8;
Pred. No. 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48.8%;
                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 81.8%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 81.8
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  1 CGGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 CGGGGACGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 GGCCGCCATCG 1
                                                                                                                                                                                                                                                              source
                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
```

KEYWORDS SOURCE ORGANISM

REFERENCE AUTHORS JOURNAL

TITLE

FEATURES

ACCESSION VERSION

RESULT 108

g

ઠે

RESULT 107 108900/c DEFINITION

a

ð

ö

Gaps

ö

PAT 02-APR-2001

linear

```
PAT 21-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 21-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 21-FEB-2003
                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                      Similarity 81.8%; Score 7.8; DB 1; Length 11; Similarity 81.8%; Pred. No. 72; 9; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 48.8%; Score 7.8; DB 1; Length 11; Similarity 81.8%; Pred. No. 72; 9; Conservative 0; Mismatches 2; Indels
                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                   Petersohn, D., Conradt, M. and Hofmann, K. Method for determining homeostasis of the skin Patent: WO 02053774-A 1364 11-JUL-2002; Henkel Kommanditgesellschaft auf Aktien (DE) Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Petersohn, D., Conradt, M. and Hofmann, K. Method for determining homeostasis of the skin Patent: WO 02053774-A 2491 11-JUL-2002; Henkel Kommanditgeellschaft auf Aktien (DE)
                                     AX624323
Sequence 1364 from Patent WO02053774.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX625450
Seguence 2491 from Patent WO02053774.
AX625450
AX625450.1 GI:28453391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 5041 from Patent W002053774.
AX628000
                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .11
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                     AX624323.1 GI:28452264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX628000.1 GI:28456038
                                                                                                                      Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GCGGCCGCAT 13
                                                                                                                                                                                       Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CGGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11 GCGTGCGCCAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11 CGTAGGGCGC 1
                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                      AX624323
                                  LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 115
AX628000/c
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
     RESULT 113
AX624323/c
                                                                                                                                                                                                                                                                                                        source
                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX625450/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                      ö
                                                                                                                                                                    PAT 02-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 06-JUL-2002
                                                                                                                                                                                                                                                                                                              Wojnowski, L. and Hustert, E.
Polymorphisms in the human hpxr gene and their use in diagnostic and therapeutic applications
Patent: WO 0120026-A 99 22-MAR-2001;
Epidauros Biotechnologia AG (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Taira,K., Warashina,M. and Warashina,T.

Nucleic acid enzymes acquiring an activity for cleaving a target rna by recognising another molevelle
Patent: EP 1213351-4 10 12-JUN-2002;

National Institute of Advanced Industrial Science and Technology
                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match

48.8%; Score 7.8; DB 1; Length 11;
Best Local Similarity 81.8%; Pred. No. 72;
Matches 9; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     48.8%; Score 7.8; DB 1; Length 11; larity 81.8%; Pred. No. 72; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                    linear
                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                  2;
                                                                                                                                                                                                                                                                                                                                                                                                                 1. .11
/organism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"
/note="artificial sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1..11
/organism="synthetic construct"
/mol_type="unassigned RNA"
/db xref="taxon.32630"
/noTe="substrate"
                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                other sequences; artificial sequences
Pred. No. 72;
); Mismatches
                                                                                                                                                       AX099036 11 bp
Sequence 99 from Patent WO0120026.
AX099036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10 from Patent EP1213351.
AX453851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                               AX099036.1 GI:13538246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX453851.1 GI:21713520
 81.8%;
                                                                                                                                                                                                                                              synthetic construct
synthetic construct
                 Conservative
                                              GCGGCGGCAT 13
                                                                              GAGAGCGGCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CGGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11 GAGAGCGGCAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11 cececeacec 1
Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 9; Conserv
Best Local
                                                                                                                                              AX099036/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX453851/c
LOCUS
                                                                                                                                RESULT 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
               Matches
                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEATURES
                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                ò
                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

ö

```
    ..11
    /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

                                                                                48.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unclassified.
1 (bases 1 to 10)
Falb, D.A.
                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 10)
                                                                                                               9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Conservative
                                                                                                                                            3 GCGGGCGCCAT 13
                                                                                                                                                                         GCGTGCGCCAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                 Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 GGCTGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
                                                                                                                                                                                                                                                                                                                                  Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown
                                                                                                                                                                         11
                                                                                                                                                                                                                                     AR053553/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 119
AR065880/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                         RESULT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 120
                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
TITLE
                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                         d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                              PAT 21-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 21-FEB-2003
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                   Score 7.8; DB 1; Length 11;
Pred. No. 72;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h Similarity 81.8%; Score 7.8; DB 1; Length 11; Similarity 81.8%; Pred. No. 72; 9; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                             Petersohn, D., Conradt, M. and Hofmann, K. Method for determining homeostasis of the skin Patent: WO 02053774-A 5041 11-JUL-2002; Henkel Kommanditgesellschaft auf Aktien (DE) Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Petersohn, D., Conradt, M. and Hofmann, K.
Method for determining homeostasis of the skin
Patent: WO 02053774-A 6643 11-JUL-2002;
Henkel Kommanditgesellschaft auf Aktien (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Petersohn, D., Conradt, M. and Hofmann, K.
Method for determining homeostasis of the skin
Patent: WO 2053774-A 8786 11-UUL-2002;
Henkel Kommanditgesellschaft auf Aktien (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX631744 11 bp DN.
Sequence 8786 from Patent WO02053774.
AX631744
                                                                                                                                                                                                                                                                                                                                                                                    11 bp DN.
Sequence 6643 from Patent W002053774.
AX629602
                                                                                                                                                          /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                          AX629602.1 GI:28457640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX631744.1 GI:28459851
                                                                                                                                                                                                                      Query Match
Best Local Similarity 81.8%;
Matches 9; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                   2 GGCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ceeceeecec 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hominidae; Homo.
                                                                                                                                                                                                                                                                                                               11 GGCGGGGCCA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11 cceceeecrec 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                              RESULT 116
AX629602/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX631744/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                AUTHORS
                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                               PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                        Compositions and methods using rchd534, a gene uregulated by shear stress
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Compositions and methods for the treatment and diagnosis of cardiovascular using RCHD528 as a target
Patent: US 5849578-A 18 15-DEC-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 46.3%; Score 7.4; DB 1; Length 10; Best Local Similarity 88.9%; Pred. No. 77; Matches 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; and indels rative 0; Mismatches 1; Indels
   1; Length 11;
                                                                                                                                                                                                 linear
                                      2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                   DNA
Score 7.8; DB
Pred. No. 72;
                                                                                                                                                                                                                                                                                                                                                                                                            Patent: US 5834248-A 18 10-NOV-1998;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10 bp
Sequence 18 from patent US 5849578.
AR065880
AR065880.1 GI:5996096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .10
/organism="unknown"
/mol_type="unassigned DNA"
                                      0; Mismatches
                                                                                                                                                                                             AR053553 10 bp 1
Sequence 18 from patent US 5834248.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .10
/organism="unknown"
                                                                                                                                                                                                                                    AR053553
AR053553.1 GI:5978415
```

```
Hominidae; Homo.
                                                                                         6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 cecceere 10
                                                                                                         10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50555555
                                                                                                                                                                                                                           KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD083132/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                 BD065267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                             LOCUS
                                                                                         ò
                                                                                                               원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                PAT 18-FEB-2000
                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                 PAT 31-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 08-AUG-2001
                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                               Unkince...
Unclassified.
Unclassified.
1 (bases 1 to 10)
Falb, D.A. and Gimbrone, M.A. Jr.
Compositions and methods for the treatment and diagnosis of cardiovascular disease using rchd523 as a target
Patent: US 5968770-A 18 19-0cT-1999;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown...
Unknown...
Unclassified.
1 (bases 1 to 10)
Falb,D.A. and Gimbrone,M.A. Jr.
Compositions and methods for the treatment and diagnosis of cardiovascular disease using rchd534 as a target
Patent: US 6225084-A 18 01-MAY-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 7.4; DB 1; Length 10; Pred. No. 77; 0; Mismatches 1; Indels
                                                                                                                                                                                                                           DB 1; Length 10;
                linear
                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                           1 (bases 1 to 10)
Stoler,D., Basik,M. and Anderson,G.
Rapid means of quantitating genomic instability
Patent: US 5912147-A 14 15-UUN-1999;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                         46.3%; Score 7.4; DB
88.9%; Pred. No. 77;
ttive 0; Mismatches
           AR071785 10 bp D
Sequence 14 from patent US 5912147.
AR071785 48071785.1 GI:7222673
                                                                                                                                                                                                                                                                                                                                                             AR080362 10 bp E
Sequence 18 from patent US 5968770.
AR080362
                                                                                                                                                                                      /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 18 from patent US 6225084.
AR148317
                                                                                                                                                                                                                                                                                                                                                                                                  AR080362.1 GI:10007097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR148317.1 GI:15112407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.3%;
                                                                                                                                                                                                                      Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8; Conservative
                                                                                                                                                                                                                                                                                         2 GCGCGCGGC 10
                                                                                                                                                                                                                                                                           3 GCGGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 GGCGCCATC 14
                                                                                    Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 8; Conserv
                                                                       Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 122
AR148317/c
                         DEFINITION
                                  ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                   AR080362/c
                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                        AUTHORS
TITLE
                                                                                                                                               JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                      RESULT 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
AR071785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
BD065267.1 GI:22610870

JP 2001509017-A/203.

Saccharomyces cerevisiae (baker's yeast)

Saccharomyces cerevisiae

Bukaryota; Fungi; Ascomycota; Saccharomycetes;

Saccharomycetales; Saccharomycetaces; Saccharomycetes;

I (bases 1 to 10)

Saccharomyces cerevisiae

AL characterization of the yeast transcriptome

AL Patent: JP 2001509017-A 203 10-JUL-2001;

THE JOHNS HORKINS UNIVERSITY SCHOOL OF MEDICINE

OS Saccharomyces cerevisiae (yeast)

PR 22-JAN-1998 JP 1998532117

PR 22-JAN-1999 US 60/035917

PR 22-JAN-1999 US 60/035917

PR 22-JAN-1997 US 60/035917

PR VICTOR E VELCULESCU, BERT VOGELSTEIN, KENNETH W KINZLER PC

CL2N15/10, C12N15/31, C07R44/3395, C12Q1/68, C12Q1/68, C12Q1/62

Characterization of the yeast transcriptome

FH KRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                euvesis2
Human matured/activated dendritic cell expression genes.
BD083132
                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                  PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism='Saccharomyces cerevisiae (yeast)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini,
                                                                                                                       Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 10)
Matsusbina, K., Hashimoto, S., Suzuki, T. and Nagai, S.
Human matured/activated dendritic cell expression genes
Patent: JP 2001327293-A 53 27-NOV-2001;
JAPAN SCIENCE AND TECHNOLOGY CORP
OS Homo sapiens (human)
PP 2001327293-A/53
                                                                         Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels

    10
    /organism="Saccharomyces cerevisiae"
    /mol type="genomic DNA"
    /db_xref="taxon:4932"

                                                                                                                                                                                                                                                                                                                                BD065267 10 bp DNA 1
Characterization of the yeast transcriptome.
                                                                      DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46.3%; Scor.
88.9%; Pred. No. ///
                                                                  Score 7.4; DB Fred. No. 77; 0; Mismatches
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BD083132.1 GI:22628742
JP 2001327293-A/53.
Homo sapiens (human)
Homo sapiens
                                                                  Query Match
Best Local Similarity 88.9%;
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
```

```
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                 Hominidae; Homo.

I (bases I to 10)
Nagai, S., Mateushima, K. and Hashimoto, S.
Human activated Th1 and Th2 cell expression genes
Patent: JP 2002186482-A 31 02-JUL-2002;
JAPAN SCIENCE AND TECHNOLOGY CORP
OS Homo sapiens (human)
PN JP 2002186482-A/31
PD 02-JUL-2002
PF 19-DEC-2000 JP 200385816
PI SHIGENORI NAGAI, KOJI MARSUSHIMA, SHINICHI HASHIMOTO PC
C12N15/09, CO7YEL4/47, CO7XEL6/18, C12P21/08, C12N15/00 CC Humar activated Th1 and Th2 cell expression genes FH Key
   Mammalia; Butheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OS Homo sapiens (human)
by JP 200216482-A/72
bp 02-UUL-2002
pr 19-DEC-2000 JP 2000385816
pr SHIGERORI NAGAI, KOLI MATSUSHIMA, SHINICHI HASHIMOTO PC
C12M15/09, C07K14/47, C07K16/18, C122P21/08, C12N15/00 CC
activated Thi and Th2 cell expression genes FH Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ce 1..10
/organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                            /organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 7.4; DB 1; Length 10;
Pred. No. 77;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 7.4; DB 1; Length 10;
Pred. No. 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human activated Th1 and Th2 cell expression genes.
BD161250.
BD161250.1 GI:27867008
JP 2002186482-A/72.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae, Homo.

1 (bases 1 to 10)

Magai,S., Matsushima,K. and Hashimoto,S.

Human activated Thi and Th2 cell expression genes
Patent: JP 2002186482-A 72 02-JUL-2002;
JAPAN SCIENCE AND TECHNOLOGY CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches

    .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

    ..10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                    46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                          8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 GCGGGCGCC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 GCCGGCGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10 GCCGGCGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BD161250/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                     REFERENCE
AUTHORS
                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hominidae; Homo.

1 (bases 1 to 10)
Matsushima, K. 190137293-A 213 27-NoV-2001;
Machon sapiens (human)
PN JP 2001327293-A/213
PN JP 2001327293-A/213
PN JP 2001305952
PP 22-MAY-2000 JP 2000150562
PP 22-MAY-2000 JP 2000150562
PP KOJI MATSUSHIMA, SHINICHI HASHIMOTO, TAKUJI SUZUKI, SHIGENORI PI
27-NOV-2001
22-MAY-2000 JP 2000150562
KOJI MATSUSHIMA, SHINICHI HASHIMOTO, TAKUJI SUZUKI, SHIGENORI PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 17-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JP 2001327293-A/213.
Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD161209.1 GI:27866967
JP 2002186482-A/31.
Homo sapiens (human)
Homo sapiens
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                       C12N15/09, C07K14/47, C07K16/18//C12P21/02, C12P21/08, C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C12N15/09, C07K14/47, C07K16/18//C12P21/02, C12P21/08, C12N15/00
                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                 Human matured/activated dendritic cell expression genes. BD083292. BD083292.1 GI:22628902 JP 2001327202-8.2.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                    46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  וו האחם על 10 pp DNA linear Human activated Thl and Th2 cell expression genes.
BD161209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers.
                                                                                                        Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46.3%; Score 7.4; D
88.9%; Pred. No. 77;
                                                                                                                                               1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

    .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 46.3
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                        8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 CGACGGCG 10
                                                                                                                                                                                                                                                                                                            3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Φ
                                                                                                                                                                                                                                                                                                                                              10 GCCGGCGC 2
                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 06606666
                                                                                                           Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
                                                      NAGAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAGA
   PF
PF
                                                                       S S H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 S E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD161209/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 126
                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                        BD083292
                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

Gaps

ö

PAT 17-JAN-2003

ö

Gaps

ô

Gapa

```
PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C12N5/10,C12P21/02,C12Q1/68,G01N33/15,G01N33/50,C12N15/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SHIVA PATIL
CI2N1S/00,A61K4S/00,A61P27/06,C07K14/47,C12N1/15,C12N1/19, PC
                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ranscription factor
Patent: JP 2002511265-A 34 16-APR-2002;
THE UNIVERSITY OF IOWA RESEARCH FOUNDATION
OS Homo sapiens (human)
PN JP 2002511265-A/34
PD 16-APR-1999 JZ 2000543608
PR 15-APR-1999 US 60/081870,22-MAY-1998 US 09/083352 PI
VAL C. SHEFFIELD, WALLACE L M ALWARD, EDWIN M STONE, DARRYL PI
                                                                                                                                                                                                                              IO bp DNA linear PAT 17-JU Glaucoma therapeutics and diagnostics based on a novel human transcription factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Glaucoma therapeutics and diagnostics based on a novel human
                                                                                                                                                                                                                                                                                                                                                                                           Hominidae: Homo.
1 (bases 1 to 10)
Sheffield,V.C., Alward,W.L.M., Stone, E.M., Nishimura, D. and
                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                        Score 7.4; DB 1; Length 10; Pred. No. 77; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 7.4; DB 1; Length 10;
Pred. No. 77;
                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 bp DNA Preparation and use of superior vaccines. BD238787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 base pair deletion
Key Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
1. .10
/organism="unidentified"
/mol_type="genomic DNA"
/db_xref="taxon:32644"

    .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                   BD226183.1 GI:33035953
JP 2002511265-A/34.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD238787.1 GI:33048557
JP 2002534056-A/205.
Homo sapiens (human)
                                                                        46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 88.9%;
And 8; Conservative
                                                        CGACGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGGCGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGGGCGC 11
                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C12N1/21,
PC C12N5/00
C12N5/00
CC 10 ba
FH Key
FT SOUTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NISHIMURA,
                                                                                                                                                                                                                                                                                        BD226183
 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 131
BD238787/c
LOCUS
                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                           RESULT 130
                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                          BD226183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                  ઠે
                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                        PAT 17-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SM unidentified
unclassified.

I (bases 1 to 10)

Matsushima, K., Hashimoto, S., Kaneko, S. and Yamashita, T.
Human liver disease-expressing genes
L Patent: JP 200220591-A 681 30-UL-2002;
JAPAN SCIENCE AND TECHNOLOGY CORP
OS Home sapiens (human)
PN JP 200220591-A/681
PD 30-ULL-2002
PF 19-JAN-2001 JP 2001012328
PI KOJI MATSUSHIMA, SHINICHI HASHIMOTO, SHUICHI KANEKO, TARO PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 17-JAN-2003
                                                                                                                                                                                                                                                                                                                          C12N15/09,C07K14/47,C07K16/18,G01N33/15,G01N33/50//C12P21/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C12N15/09, C07K14/47, C07K16/18, G01N33/15, G01N33/50//C12P21/02,
                                                                                                                                     unclassified.

1 (bases 1 to 10)
Matsushima,K., Hashimoto,S., Kaneko,S. and Yamashita,T.
Human liver disease-expressing genes
Patent: JP 2002209591-A 656 30-JUL-2002;
JAPAN SCIENCE AND TECHNOLOGY CORP
OS Homo sapiens (human)
PN JP 2002209591-A/656
PD 30-JUL-2002
PP 19-JAN-2001 JP 2001012328
PI KOJI MATSUSHIMA,SHINICHI HASHIMOTO,SHUICHI KANEKO,TARO PI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                       'organism='Homo sapiens (human)'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; tive 0; Mismatches 1; Indels
                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                       Human liver disease-expressing genes
Key Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human liver disease-expressing genes
Key Location/Qualifiers
                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                 Human liver disease-expressing genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human liver disease-expressing genes.
BD167136
BD167136.1 GI:27872948
JP 2002209591-A/681.
unidentified

    .10
    /organism="unidentified"
/mol_type="genomic DNA"
/db_xref="taxon:32644"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                              BD167111.1 GI:27872923
                                                                                              JP 2002209591-A/656 unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                            C12P21/08,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C12P21/08,
                                                                                                                                                                                                                                                                                                                                                            C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                             unidentified
                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10 GCCGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                  OS HOMO
PD JP 20
PD 30-JU
PF 19-JA
PR KOJI
YAMASHITA
PC C12N1
PC C12N2
PC C12N2
PC C12N2
PC C12N2
PC C12N2
PC HUMAN
FF KEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OS HOMO
PN JP 20
PD 30-JU
PF 19-JA
PI KOJI
YAMASHITA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BD167136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SSSSEEE
      RESULT 128
BD167111/c
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                            ORGANISM
                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 129
                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD167136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
```

ö

Gaps

```
БС
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              111162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAGFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BD239058/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ଟ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BRUCE L ROBERTS, SRINIVAS SHANKARA
C12N15/09,C12N15/09,A61K39/00,A61P35/00,A61P37/04,C12N1/15, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C12N1/21, C12N5/10, G01N33/15, G01N33/50, G01N33/53, G01N33/566, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JULYJOZZA, L GIJOJUGODZA

HOMO Bapiens (human)

Homo Bapiens (human)

Homo Bapiens (human)

Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;

Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;

1 (bases Homo.

1 (bases 1 to 10)

Roberts; B.L. and Shankara, S.

Perparathon and use of superior vaccines

Patent: JP 2002534056-A 240 15-OCT-2002;
                                 Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                      60/090040 PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/089853 PR
60/080939 PR
60/080939 PR
60/080991 PR
60/080948 PR
60/0800448 PR
60/080048 PR
60/080844 PR
60/080844 PR
60/080877 PR
60/090047 PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090079 P
60/08993 P
60/090072 P
60/089991 P
60/090048 P
60/090043 P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ce 1. .10
/organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 7.4; DB 1; Length 10;
Pred. No. 77;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                      ns
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090039,19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Preparation and use of superior vaccines. BD238822. GI:33048592 JP 200574076 TP 200
                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090041,19-0TN-1998 U
60/080997,19-0TN-1998 U
60/080035,19-0TN-1998 U
60/08992,19-0TN-1998 U
60/089878,19-0TN-1998 U
60/089878,19-0TN-1998 U
60/099999,19-0TN-1998 U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090042,19-JUN-1998 U
60/090044,19-JUN-1998 U
60/090080,19-JUN-1998 U
60/089994,19-JUN-1998 U
60/090078,19-JUN-1998 U
60/090076,19-JUN-1998 U
                                                                                            Hominidae, Homo.

1 (bases 1 to 10)

Roberts, B.L. and Shankara, S.

Preparation and use of superior vaccines
Patent: JP 2002534056-A 205 15-OCT-2002;

GENZYME CORP

    .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                  Homo sapiens (human)
JP 2002534056-A/205
15-OCT-2002
18-JUN-1999 US 60/090039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
JP 2002534056-A/240
15-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A 46.3%;
Similarity 88.9%;
8; Conservative
Homo sapiens
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-7UN-1998 US
19-7UN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                || ||||||
CGACGGGCG 1
                                                                                                                                                                                                                                                                                  OS Homo sap
PN JP 20025
PD 15-OCT-2
PF 18-JUN-1
PR 19-JUN-1998 U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 ceeceeece
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C12N1/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1133C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SO NA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 132
BD238822
   ORGANISM
                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
```

```
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Я
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C12N15/09, C12N15/09, A61K39/00, A61P35/00, A61P37/04, C12N1/15,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C12N1/21, C12N5/10, G01N33/15, G01N33/50, G01N33/53, G01N33/56,
                                                                     꾮
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090040 PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                 60/090040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 60/09C 60/089853 F 60/080903 F 60/080903 F 60/080903 F 60/090043 F 60/090043 F 60/089833 F 60/089833 F
                                                             60/099833
60/089833
60/089993
60/089993
60/080999
60/080043
60/080043
60/089844
60/089844
60/089844
60/089844
60/089833
60/089833
60/089844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Preparation and use of superior vaccines
Key Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090039,19-JUN-1998
                                                                                                              9 JP 2000554749
8 US 60/090041,19-JUN-1998 U 60/080997,19-JUN-1998 U 60/080997,19-JUN-1998 U 60/080992,19-JUN-1998 U 60/090000,19-JUN-1998 U 60/09004,19-JUN-1998 U 60/09004,19-JUN-1998 U 60/09004,19-JUN-1998 U 60/090080,19-JUN-1998 U 60/090080,19-JUN-1998 U 60/090080,19-JUN-1998 U 60/090080,19-JUN-1998 U 60/090078,19-JUN-1998 U 60/0900798,19-JUN-1998 U 60/0900798 U 60/090079 U 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/080041, 19-JUN-1998 US
60/089997, 19-JUN-1998 US
60/089997, 19-JUN-1998 US
60/089997, 19-JUN-1998 US
60/089999, 19-JUN-1998 US
60/0809099, 19-JUN-1998 US
60/0900042, 19-JUN-1998 US
60/090044, 19-JUN-1998 US
60/090044, 19-JUN-1998 US
60/0900044, 19-JUN-1998 US
60/0900044, 19-JUN-1998 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 bp DNA Preparation and use of superior vaccines. BD239058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hominidae, Homo.

1 (bases 1 to 10)

Roberts, B.L. and Shankara, S.

Preparation and use of superior vaccines
Patent: JP 2002534056-A 476 15-OCT-2002;
GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SRINIVAS SHANKARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
JP 2002534056-A/476
15-OCT-2002
18-JUN-1999 US 60/090039,
UN-1998 US 60/090031,19-JUN
UN-1998 US 60/090031,19-JUN
UN-1998 US 60/090035,19-JUN
UN-1998 US 60/090035,19-JUN
UN-1998 US 60/090035,19-JUN
UN-1998 US 60/090000,19-JUN-1-1998 US 60/090000,19-JUN-1-1998 US 60/090000,19-JUN-1-1998 US 60/090000,19-JUN-1-1998 US 60/0900042,19-JUN-1-1998 US 60/090044,19-JUN-1-1998 US 60/090044,19-JUN-1-1-1998 US 60/090044,19-JUN-1-1998 US 60/090044,19-JUN-1-1-1998 US 60/090044,19-JUN-1-1-1998 US 60/090044,19-JUN-1-1-1998 US 60/090045,19-JUN-1-1998 US 60/090044,19-JUN-1-1998 US 60/090045,19-JUN-1-1998 US 60/090044,19-JUN-1-1998 US 60/090045,19-JUN-1-1998 US 60/090045,19-JUN-1-1998 US 60/090045,19-JUN-1-1998 US 60/090045,19-JUN-1-1998 US 60/090045,19-JUN-1-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.3%; Score 7.4; DB
88.9%; Pred. No. 77;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C12N15/00, C12N5/00, C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/111715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GI:33048828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ROBERTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BD239058.1 GI:330488
JP 2002534056-A/476.
Homo sapiens (human)
PR 19-JUN-1999 US 19-JUN-1998 US 19-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGACGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-70N-1998
19-70N-1998
19-70N-1998
19-70N-1998
19-70N-1998
19-70N-1998
19-70N-1998
19-70N-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     505555555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G01N37/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C12N1/19,
```

```
database project)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
JP 2000279181-A/78
10-OCT-2000
                                                                                                                                                      h 46.3%;
Similarity 88.9%;
8; Conservative
                                                                                                                                                                                                                                                                                                                                                             E39545.1 GI:18621636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46.3%;
                                                                                                                                                                                                                                                                                                                                                                         JP 2000279181-A/78.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8; Conservative
                                                                                                                                                                                                              2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GCGGGCGGC 11
                                                                                                                                                                                                                                           1 GACGGCGG 9
                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 GCCGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E54713
                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
JOURNAL
         JOURNAL
                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 137
                                                                                                                                                                                                                                                                                                   E39545/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E54713/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                          g
                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
19-JUN-1998 US 60/089994,19-JUN-1998 US 60/090077 PR 19-JUN-1998 US 60/090078,19-JUN-1998 US 60/090074 PR 60/090078,19-JUN-1998 US 60/090076,19-JUN-1998 US 60/090045 PR 60/191715 ENCEC-1998 US 60/090045 PR PR CALSULS, SRINIVAS SHANKARA PR CALSULS,09, CL2N15/09, A61K39/00, A61P35/00, A61P37/04, CL2N1/15, PC
                                                                                                     C12N1/21, C12N5/10, G01N33/15, G01N33/50, G01N33/53, G01N33/566, PC
                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 19-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 25-JAN-2005
                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Falb,D.A. and Gimbrone,M.A.

Composition and methods for the treatment and diagnosis of cardiovascular disease
Cardiovascular disease
Patent: EP 140372-A 18 31-MAR-2004;
Millennium Pharmaceuticals, Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bender, M. and Jacobsen, C.S.
Method for selective detection of a target nucleic acid
                                                                                                                                                                                         /organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                              Preparation and use of superior vaccines Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 22 from Patent WO2005003384.
CQ983527
                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="unidentified"
/mol_type="unassigned DNA"
/db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CQ793722 10 bp
Sequence 18 from Patent EP1403372.
CQ793722. GI:46406669
                                                                                                                                  C12N15/00, C12N5/00, C12N15/00

    .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  unidentified unclassified sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CQ983527.1 GI:58191888
                                                                                                                                                                                                                                                                                                                             8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8; Conservative
                                                                                                                                                                                                                                                                                                                                                         8 CGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 GGCGCCATC 14
                                                                                                  PC C12...
G01N37/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unidentified
                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                           10 CGCCTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                      C12N1/19,
                                                                                                                                  2355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 134
CQ793722/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REPERENCE
                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CQ983527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 27-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E54713.1 GI:22556196
JP 2001211883-A/65.
Homo sapiens (human)
Homo sapiens
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                              Gaps
                                                             1. 10

Organism="synthetic construct"

/mol_type="unassigned DNA"

/db_xref="texon:32630"

/note="Probe based on primer BSR1407/16 (ribosomal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PN 12 2000279181-A/78
PD 10-OCT-2000
PF 01-APR-1999 JP 1999095481
PR SHINICHI HASHIMOTO, KOJI MATSUSHIMA, TAKUJI SUZUKI PC C12N15/09, C07K14/475, C07K16/18, C12N15/00
CC LOCATION (Qualifiers)
FT SOURCE 1. .10
/organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                            ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 7.4; DB 1; Length 10; Pred. No. 77; 0; Mismatches 1; Indels
                                                                                                                                                                                                                  Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
Patent: WO 2005003384-A 22 13-JAN-2005;
Danmarks og Gronlands Geologiske Undersogelse (DK)
Location/Qualifiers
                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                          10 bp DNA
Genes with human dendritic cell expression.
E39545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae, Homo.

1 (bases 1 to 10)
Hashimoto,S., Mateushima,K. and Suzuki,T.
Genes with human dendritic cell expression
Science & Tech Agency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E54713 10 bp DNA Human normal liver cell expression genes.
                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                               Score 7.4; DB Pred. No. 77; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
```

; 0

Gaps

ö

PAT 08-OCT-2004

```
Unclassified.

1 (bases 1 to 10)
Sprunck, S., Kluth, A., Becker, D., Luetticke, S. and Loerz, H. Promoters for gene expression in caryopses of plants Parent: US 6794559-A 18 21-SEP-2004;
BAYER CropScience GmbH; Frankfurt am Main;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 46.3%; Score 7.4; DB 1; Length 10; Best Local Similarity 88.9%; Pred. No. 77; Matches 8; Conservative 0; Mismatches 1; Indels
                                                                                                                         n
Similarity 88.9%; Pred. No. 77;
8; Conservative 0; Mismarch.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 10)
Froehlich, A.C., Loros, J. and Dunlap, J.C.
Methods for regularing gene expression using light
Patent: US 6733996-A 2 11.MAY-2004;
Trustees of Dartmouth College; Hanover, NH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                       DNA
    material
Patent: US 6588746-A 1284 08-JUL-2003;
NexPress Solutions LLC; Rochester, NY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10 bp | Sequence 18 from patent US 6794559.
                                                                                                                                                                                                                                                                                                                       AR534352
Sequence 2 from patent US 6733996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                   1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                      AR534352
AR534352.1 GI:53924544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR584164
AR584164.1 GI:56622361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 GCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGCGGGCGG 10
                                                                                                                                                                                                         7 GCGCCATCG 15
                                                                                                                                                                                                                                        GCGGCGTCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9 GCGTCATCG 1
                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
Unclassified.
                                                                                                                                              Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 141
AR584164/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                        RESULT 140
AR534352/c
                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  à
                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
Hominidae; Homo.

E 1 (bases 1 to 10)
S Matsushima.K., Hashimoto,S., Kaneko,S. and Yamashita,T.
Matsushima.N., Hashimoto,S., Kaneko,S. and Yamashita,T.
L Patent: JP 2001211883-A 65 07-AUG-2001;
SCIENCE & TECH AGENCY
OS Homo sapiens (human)
PN JP 2001211883-A/65
PD 07-AUG-2001
PF 31-JAN-2000 JP 2000023170
PI KOJI MATSUSHIMA,SHINICHI HASHIMOTO,SHUICHI KANEKO,TARO PI YAMASHITA
PC C12N15/09,C07K16/18,C12P21/02,C12N15/00
CC
FH Key Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 25-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PAT 17-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 10)
Katayama, E., Satc, D., Ooka, H. and Inoue, T.
Process for the preparation of optically active amino alcohols
Patent: US 6410749-4 18 25-UUN-2002;
Nippon Soda Co., Ltd.; Tokyo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 10)
Dobrindt,D. and Fischer,U.
Device for generating an offset of transported flexible sheet
                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                   .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                    Score 7.4; DB 1; Length 10;
Pred. No. 77;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 88.9%; Pred. No. 77; 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                     Location/Qualifiers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10 bp DN
US 6588746.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 bp
Sequence 18 from patent US 6410749.
                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .10
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1284 from patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR351742
AR351742.1 GI:33753538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR216693.1 GI:23315331
                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 88.9%;
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                    3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |||||| |||
|||||| |||| ||||
                                                                                                                                                                                                                                                                                                                                                                                                                              10 GCCGGCGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR351742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR216693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10
                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AR216693/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                REFERENCE
                                AUTHORS
                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AR351742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                          FEATURES
                                                                                                COMMENT
```

ઠે

ö

Gaps

; 0

PAT 15-DEC-2004

ö

Gaps

.; 0

```
Hominidae; Homo.
                                                                                                                                                                                                                                          2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8 CGCCATCGT 16
                                                                                                                                                                                                                                                           1 GGCGCGCGG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGACATCGT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX152112/c
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                           source
                ORGANISM
                                                                                                                                                                                                                                                                                                       RESULT 145
AX104949/c
                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 146
                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
JOURNAL
                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                            PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 14-FEB-2005
                                                                                                                                                                                              Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 682514-A 678 30-NOV-2004;
Bast Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation.
Patent: US 6825144 A 799 30-NOV-2004;
East Carolina University; Greenville, NC
                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                          46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77;
                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                     Sequence 678 from patent US 6825174.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 789 from patent US 6825174. AR610667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AR630140 10 bp DN
Sequence 194 from patent US 6838556.
AR630140.1 GI:59762459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 77;
0; Mismatches
                                                                                                                                                                                                                                                                         1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1. .10
/organism="unknown"
                                                                                                             AR610556.1 GI:56666032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR610667.1 GI:56666143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
Unclassified.
1 (bases 1 to 10)
                                                                                                                                                                         1 (bases 1 to 10) Nyce, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 46.3
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                    8; Conservative
                                                                                                                                                                                                                                                                                                                                                                           2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                   2 GGAGGCCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 GCGCCATCG 15
              N
                                                                                                                                                              Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GCGCCATGG 9
111 1111
                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown.
                                                                                                                                                   Unknown
                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                  DEFINITION
                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 144
                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                            AR610556
                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AR610667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AR630140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                  RESULT
                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
              셤
                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

```
SM Unknown.

Unclassified.

Unclassified.

SR Vim, J.P., Starr, D.B., Tam, A.W., Laurance, M.E., Michelotti, E.F., R. Kim, J.P., Starr, D.B., Tam, A.W., Thomas, R.L., Kongpachith, A., Sheppard, L.T., Kim, M.Y. and Bruice, T.W.

Sheppard, L.T., Kim, M.Y. and Bruice, T.W.

Promoters for regulated gene expression

NAL Patent: US 6818556-A 194 04-JAN-2005;

Genelabs Technologies, Inc.; Redwood City, CA
                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 30-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Krieg,A.M., Schetter,C. and Vollmer,J.C.
Immunostimulatory nucleic acids
Batent: WO 0122972-A 1141 05-APR-2001;
UNIVERSITY OF IOWA RESEARCH FOUNDATION (US) ; Coley Pharmaceutical
GmbH (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                 .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity 88.9%; Score 7.4; DB 1; Length 10; 8. Conservative 0; Mismatches 1. T.A.
                                                                                                                                                                                                                                                                                                                    46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77;
                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Velculescu, V.E., Vogelstein, B. and Kinzler, K.W.

    .10
    forganism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1141 from Patent W00122972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human transcriptomes
Patent: WO 0138577-A 27 31-MAY-2001,
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 27 from Patent W00138577.
AXIS2112
                                                                                                                                                                                                                                                 /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AX104949.1 GI:13921146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX152112.1 GI:14533763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                 8; Conservative
```

ò

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                     46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; Live 0; Mismatches 1; Indels
                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Velculescu, V.E., Vogelstein, B. and Kinzler, K.W. Human transcriptomes
Patent: WO 0.138577.A 407 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                        Velculescu, V.E., Vogelstein, B. and Kinzler, K.W. Human transcriptomes
Patent: WO 0138577-A 239 31-MAY-2001;
The Johns Hopkins University (US)
                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AX153403 10 bp D1 Sequence 1318 from Patent WO0138577.
                                                                                                         10 bp 1
Sequence 239 from Patent W00138577,
AX152324

    .10
    /organism="Homo sapiens"
    /mol_type="unassigned DNA"
    /db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 bp 1
Sequence 407 from Patent WO0138577.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                             AX152324.1 GI:14533975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX152492.1 GI:14534143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                               Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                             Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hominidae; Homo.
   GCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 GGCGGCATC 14
                     | |||||||
GTGGCATCG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CGGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGACGGGCG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCAGCATC 1
                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 151
AX153403/c
LOCUS
DEFINITION 5
                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
                                                                                                              LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX152492/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                RESULT 149
AX152324/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
   à
                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                           PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Buarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h 46.3%; Score 7.4; DB 1; Length 10; Similarity 88.9%; Pred. No. 77; 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; ive 0; Mismatches 1; Indels
                                                                                Length 10;
                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Velculescu, V.E., Vogelstein, B. and Kinzler, K.W. Human transcriptomes
Patent: WO 0138577-A 129 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                      Velculescu, V.E., Vogelstein, B. and Kinzler, K.W.
                                                                              Score 7.4; DB 1;
Pred. No. 77;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human transcriptomes
Patent: WO 0138577-5 57 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 bp | Sequence 129 from Patent WO0138577.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                          AXIS2142 10 bp
Sequence 57 from Patent WO0138577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AXI52214
AX152214.1 GI:14533865
                                                                                                                                                                                                                                                                                                          AX152142.1 GI:14533793
                                                                             th 46.3%; Similarity 88.9%; 8; Conservative
                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hominidae; Homo.
                                                                                                                                            5 GGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 CGGGGGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGCGGCA 9
                                                                                                                                                                           10 GGCCGCAT 2
                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                             AX152142
                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
ORGANISM
 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 148
AX152214/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                             RESULT 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                         AX152142
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                원
```

à

Gapa

ö

FEATURES

PAT 22-JUN-2001

linear

```
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Myc targets
Patent: WO 0185941-A 22 15-NOV-2001;
Academiach Ziekenhuis bij de Universiteit van Amsterdam (NL)
Location/Qualifiers
                                                                                                                                                                          Score 7.4; DB 1; Length 10;
Pred. No. 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; 1; Indels ive 0; Mismatches 1; Indels
                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Velculescu, V.E., Vogelstein, B. and Kinzler, K.W.
        Velculescu, V.E., Vogelstein, B. and Kinzler, K.W.
                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human transcriptomes
Patent: WO 0139577-A 1530 31-MAY-2001,
The Johns Hopkins University (US)
Location/Qualifiers
                      Human transcriptomes
Patent: WO 0138577-A 1464 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                          10 bp DP Sequence 1530 from Patent WO0138577. AX153615. GI:14535266
                                                                                                                                                                                                            0; Mismatches

    .10
    /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX301308
Sequence 22 from Patent W00185941.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Versteeg, R. and Caron, H.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX301308.1 GI:17382391
                                                                                                                                                                          46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                         Query Match
Best Local Similarity 86.5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hominidae; Homo.
                                                                                                                                                                                                                                             3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                               10 GCCGCCGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 GCCGGCGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX301308
                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                            RESULT 154
AX153615/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX301308/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
        AUTHORS
                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KEYWORDS
                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 22-JUN-2001
                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                       46.3%; Score 7.4; DB 1; Length 10;
88.9%; Pred. No. 77;
tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; 1:ve 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Velculescu, V.E., Vogelstein, B. and Kinzler, K.W. Human transcriptomes
Patent: WO 0138577-A 1346 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                     Velculescu, V.E., Vogelstein, B. and Kinzler, K.W.
                                                                                                                                                                   Human transcriptomes
Patent: WO 0138577-A 1318 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AX153431
Sequence 1346 from Patent WO0138577.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 bp DN
Sequence 1464 from Patent WO0138577.
AX153549
                                                                                                                                                                                                                                      1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
 AX153403
AX153403.1 GI:14535054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX153431
AX153431.1 GI:14535082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX153549.1 GI:14535200
                                                   Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                    Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                              3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 CGACGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                   || |||||||
|GCCGGCGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
8; Conserv?
                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CGCCGCCC
                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                 SOURCE
ORGANISM
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 152
AX153431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX153549/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
```

REFERENCE AUTHORS

FEATURES

g

KEYWORDS SOURCE

Locus

ઠે a REFERENCE

ö

Gaps

ö

PAT 30-NOV-2001

linear

```
BD008037.1 GI:18636410
JP 2001069993-A/313.
Homo sapiens (human)
Homo sapiens
                                                                           AX924169.1 GI:40217140
                                                                                                     synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                        8; Conservative
                                                                                                                                                                                                                                                                                                                                                                  1 CGGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                   9 CGCCGGCTG 1
                                                                                                                                                     Woeldike, H.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A61P29/00,
PC A61P3
CC PH Key
FH Key
                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                   SOURCE
                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
            RESULT 158
AX924169/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 159
BD008037/c
                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
JOURNAL
                                                               ACCESSION
VERSION
                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCUS
                                                                                                                                                                                                                                                                                                                                                                  ઠ
                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 26-MAR-2003
                                                                                                                                                      PAT 30-NOV-2001
                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Liu,Q. Position dependent recognition of gnn nucleotide triplets by zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                        Gaps
                                                                                                                                                                                                                                                                                                        Wic targets
Patent: WO 0185941-A 24 15-NOV-2001;
Academisch Ziekenhuis bij de Universiteit van Amsterdam (NL)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ó,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 7.4; DB 1; Length 10;
Pred. No. 77;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 10;
             DB 1; Length 10;
                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                       1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="synthetic construct"
                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fingers
Patent: WO 0242459-A 1284 30-MAY-2002;
Sangamo Biosciences Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic construct
synthetic construct
other sequences; artificial sequences
            Score 7.4; DB Pred. No. 77; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1284 from Patent WO0242459.
                                                                                                                                                                                                                                                                                                                                                                1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 46.3%; Score 7.4; DE Best Local Similarity 88.9%; Pred. No. 77; Matches 8; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="example target DNA"
                                                                                                                                                    AX301310 10 bp
Sequence 24 from Patent WO0185941.
AX301310
AX301310.1 GI:17382393
                                                                                                                                                                                                                                                                                      1
Versteeg, R. and Caron, H.N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX667835.1 GI:29291372
             46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                n
Similarity 88.9%;
8; Conservative (
                                                                                                                                                                                                                      Homo sapiens (human)
Ouery Match
Best Local Similarity 88.۶۰
سور 8، Conservative
                                                                                                                                                                                                                                                                         Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7 GCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GCGGGCGGC 11
                                                               6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GCGGCGTCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10 GCCGGCGC 2
                                                                                      9 GGCAGCATC 1
                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                      KEYWORDS
SOURCE
ORGANISM
                                                                                                                             RESULT 156
AX301310/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AX667835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                      d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                               ઠ
```

```
Method for the preparation of recombinant mammalian heparin-binding protein (hb) Patent: WO 03080660-A 26 02-OCT-2003; Leukotech A/S (DK)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
         PAT 18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 10)
Matsushima, K., Hashimoto, S. and Suzuki, T.
Exactivated human monocyte expressing genes
Patent: UP 2001069993-A 313 21-MAR-2001;
OS Homo sapiens (Duman)
N JP 2001069993-A, 313 21-MAR-2001;
PP 2001069993-A, 313 21-MAR-2001;
PP 2001069993-A, 313 21-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PI KOJI MATSUSHIMA, SHINICHI HASHIMOTO, TAKUJI SUZUKI PC
C12N15/09, C07K14/47, C07K16/18, G01N33/50, G01N33/53//A61K45/00, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match

46.3%; Score 7.4; DB 1; Length 10;
Best Local Similarity 88.9%; Pred. No. 77;
Matches 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 77; ative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 bp DNA line
LPS activated human monocyte expressing genes.
BD008037
                                                                                                                                                                                                                                                                                                                                                               1..10
/organism="synthetic construct"
/mol type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
            DNA
                                                                                                                                                                    other sequences; artificial sequences
10 bp 1
Sequence 26 from Patent WO03080660.
AX924169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A61P31/00, C12P21/08, C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="PCR primer 4816"
                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
```

Gaps

.; 0

PAT 08-SEP-2000

```
Haas,J.
Method and system for computationally identifying clusters within a set of sequences
Patent: US 6109776-A 31 29-AUG-2000;
Location/Qualifiers
 Identification of polycystic kidney disease gene, diagnostics and treatment
Patent: US 5891628-A 34 06-APR-1999,
Location/Qualifiers
                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                        Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 10;
                                                                                                                                                                                                                                                                                                                     Untonom.

Unclassified.

E 1 (bases 1 to 10)

S Margolskee, R. F.

Gustducin materials and methods

AL Patent: US 608000-A 45 28-DEC-1999;

Location/Qualifiers

Location/Qualifiers
                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          h 43.8%; Score 7; DB 1; Similarity 100.0%; Pred. No. 95; 7; Conservative 0; Mismatches
                                                                                                     43.8%; Score 7; DB 1
100.0%; Pred. No. 95;
tive 0; Mismatches
                                                      1. .10
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                 AR096456 10 bp 1
Sequence 45 from patent US 6008000.
AR096456.1 GI:10025273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR107342 10 bp 10 Sequence 31 from patent US 6109776. AR107342 AR107342.1 GI:12822829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .10
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="unknown"
/wol_type="unassigned DNA"
                                                                                                       Query Match
Best Local Similarity 100.0
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
Unclassified.
                                                                                                                                                         10 GCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 GGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 GCATCGT 16
                                                                                                                                                                         10 GCATCGT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGCCGC 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |||||||
9 GCATCGT 3
                                                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unknown.
                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                       RESULT 163
AR096456
                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 164
AR107342/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
    TITLE
                                                                                                                                                            ઠે
                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                         PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 29-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAT 18-FEB-2000
                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown.
Unclassified.
(Lasses 1 to 10)
Reeders,S., Schneider,M. and Glucksmann,M.Alexandra.
                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                 Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
                                                                                                                                                       Muknow.

M Unknow.

Unclassified.

1 (bases 1 to 10)

S Chen, L. Bo., Bao, S. and Liu, Y.

Nucleic acids encoding tumor marker

Nucleic acids encoding tumor marker

Nucleic 105 5872235-A 11 16-FEB-1999;

Location/Qualifiers

10 "...rknown"
                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                             43.8%; Score 7; DB 1;
100.0%; Pred. No. 95;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 10)
Margolskee, R.F.
Gustducin polypeptides and fragments
Patent: US 5817759-A 45 06-OCT-1998;
Location/Qualifiers
                                                                                  10 bp 1
Sequence 11 from patent US 5872235.
AR036558
AR036558.1 GI:5953226
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 45 from patent US 5817759.
AR044891
AR044891.1 GI:5966356
                                                                                                                                                                                                                                                             1. .10
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .10
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10 bp I
Sequence 34 from patent US 5891628.
AR069259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AR069259.1 GI:7220147
                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.00
--hes 7; Conservative
3 GCGGGCGC 11
             10 GCCGGCGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S GGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                  1 0660666 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGCGGC 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unknown.
                                                                                                                                                     Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                           RESULT 160
AR036558/c
LOCUS
                                                                                                 DEFINITION
ACCESSION
                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AR069259/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                              AR044891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                       셤
ò
                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
```

ö

Gaps

ö

PAT 14-FEB-2001

ö

Gaps

```
œ
                                                                              SOURCE
           LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD166500/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
3D161421/c
                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                   REFERENCE
AUTHORS
                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                  VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                1. (bases 1 to 10)
Keinath,A.P., Somai,B.M. and Dean,R.A.
Method of diagnosing gummy stem blight in plants using a polymerase
chain reaction assay
Patent: US 6258537-A 5 10-JUL-2001;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                               PAT 18-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                       PAT 17-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Artificial Sequence
Artificial Sequence
1P 2002058495-A/3
26-FEB-2002
22-AUG-2000 JP 2000255737
HIROYUKI TOMITA,TOSHIRO SAITO,MASATOSHI NARAHARA,KOICHI KATO
GILZNI5/09,CIZMI/00,CIZQI/68,G0IN33/53,G0IN33/566,G0IN33/574,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description of Artificial Sequence:A miniheirpin motif FH Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                       buli5595 10 bp DNA linear PAT
Observation alley for expression of cancer-related gene.
BD135595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct
synthetic construct
other sequences, artificial sequences.
1 (Dases 1 to 10)
Tomita.H., Saito,T., Narahara,M. and Kato,K.
Observation alley for expression of cancer-related gene
Patent: JP 2002058495-A 3 26-FEB-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'organism='Artificial Sequence'
                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 43.8%; Score 7; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 95; Matches 7; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                             Length 10;

    .10
    forganism="synthetic construct"
/mol type="genomic DNA"
    /db_xref="taxon:32630"

                                        DNA
                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                            Query Match
43.8%; Score 7; DB 1,
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                 /mol_type="unassigned DNA"
                                     AR161932 10 bp
Sequence 5 from patent US 6258537.
AR161932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                      1. .10
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G01N37/00, C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BD135595.1 GI:23230540
                                                                              AR161932.1 GI:16228963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JP 2002058495-A/3.
                                                                                                                        Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 GGCGGC 11
                                                                                                                                                                                                                                                                                                                                                   7 GCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGCGGC 7
                                                                                                                                                                                                                                                                                                                                                                            8 GCGGCAT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                DEFINITION
ACCESSION
VERSION
KEYWORDS
          RESULT 165
AR161932/c
                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 166
                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                    BD135595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

RESULT 167

```
PAT 17-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 17-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C12N15/09, C07K14/47, C07K16/18, G01N33/15, G01N33/50//C12P21/02,
                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCE 1 (bases 1 to 10)
ORS Nagai,S., Matsushima,K. and Hashimoto,S.

B Human activated Thl and Th2 cell expression genes
VAL PLEENT: JP 2002186482-A 243 02-JUL-2002;
JAPAN SCIENCE AND TECHNOLOGY CORP
OS Homo sapiens (human)
PN UP 2002186482-A 243
PD 02-JUL-2002
PP 19-DEC-2000 JP 2000385816
PI SHIGENORI NAGAI,KOJI MATSUSHIMA,SHINICHI HASHIMOTO PC CI2NIS/O9,COYKI4/4/4,COYKI6/18,CI2R21/08,CI2RIS/00 CC Human activated Th1 and Th2 cell expression genes FH Key Location/Qualifiers
FT source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism='Homo sapiens (human)'.
Location/Qualifiers
10 bp DNA linear Human activated Th1 and Th2 cell expression genes. BD161421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 bp DNi
Human liver disease-expressing genes.
BD166500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43.8%; Score 7; DB 1
100.0%; Pred. No. 95;
ative 0; Mismatches

    .10
    /organism="Homo sapiens"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .10
/organism="unidentified"
                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="genomic_DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                 BD161421.1 GI:27867179
JP 2002186482-A/243.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BD166500.1 GI:27872312
JP 2002209591-A/45.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unidentified
                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 CGGCATC 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
```

띪

60/090040

05 60/089853 1

ž

ò 셤

```
19-JUN-1998 US 60/090041,19-JUN-1998 US 60/099853 PR 19-JUN-1998 US 60/090041,19-JUN-1998 US 60/090079 PR 19-JUN-1998 US 60/090035,19-JUN-1998 US 60/090079 PR 19-JUN-1998 US 60/090035,19-JUN-1998 US 60/090072 PR 19-JUN-1998 US 60/090072 PR 19-JUN-1998 US 60/090042,19-JUN-1998 US 60/090048 PR 19-JUN-1998 US 60/090042,19-JUN-1998 US 60/090048 PR 19-JUN-1998 US 60/090042,19-JUN-1998 US 60/090044 PR 19-JUN-1998 US 60/090044 PR 19-JUN-1998 US 60/090047 PR 19-JUN-1998 US 60/090047 PR 19-JUN-1998 US 60/090078,19-JUN-1998 US 60/090045 PR 19-JUN-1998 US 60/090047 PR 19-JUN-1998 US 60/090045 PR 19-JUN-1998 US 60/090047 PR 19-JUN-1998 US 60/090047 PR 19-JUN-1998 US 60/090047 PR 19-JUN-1998 US 60/0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PC C12N1/21, C12N5/10, G01N33/15, G01N33/50, G01N33/53, G01N33/566, PC G01N37/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 10)

Roberts, B.L. and Shankara, S.
Perparation and use of superior vaccines
Patent: JP 2002534056-A 441 15-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism='Homo sapiens (human)'. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 10;
15-OCT-2002
18-JUN-1999 JP 2000554749
18-JUN-1998 US 60/090039,19-JUN-1998 US
JUN-1998 US 60/090031,19-JUN-1998 US 60/090035,19-JUN-1998 US 60/090035,19-JUN-1998 US 60/090035,19-JUN-1998 US 60/090035,19-JUN-1998 US 60/09000,19-JUN-1998 US 60/09000,19-JUN-1998 US 60/09000,19-JUN-1998 US 60/09004,19-JUN-1998 US 60/090042,19-JUN-1998 US 60/090044,19-JUN-1998 US 60/0900404,19-JUN-1998 US 60/0900404,19-JUN-1998 US 60/0900404,19-JUN-1998 US 60/0900404,19-JUN-1998 US 60/0900404,19-JUN-1998 US 60/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T2N15/00,C12N5/00,C12N15/00
Preparation and use of superior vaccines
Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 bp DNA Preparation and use of superior vaccines. BD239023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090041,19-JUN-1998 US
60/089997,19-JUN-1998 US
60/08992,19-JUN-1998 US
60/08992,19-JUN-1998 US
60/089997,19-JUN-1998 US
60/089999,19-JUN-1998 US
60/080042,19-JUN-1998 US
60/090042,19-JUN-1998 US
60/090042,19-JUN-1998 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             43.8%; Score 7; DB 1
100.0%; Pred. No. 95;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (human)
JP 2002534056-A/441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD239023.1 GI:33048793
JP 2002534056-A/441.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C12N1/19,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGCGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SSEFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD239023/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                               PAT 17-JAN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C12N15/09, C07K14/47, C07K16/18, G01N33/15, G01N33/50//C12P21/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD238593
BD238593.1 GI:33048363
JP 2002534056-A/11.
Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Discort.

BD166712.1 GI:27872524

Unidentified

I (bases I to 10)

Matsushima, K., Hashimoto, S., Kaneko, S. and Yamashita, T. Human liver disease-expressing genes

L. Patent: JP 2002209591-A 257 30-JUL-2002;

JAPAN SCIENCE AND TECHNOLOGY CORP

OS Homo sapiens (human)

PN JP 2002209591-A/257

PP 30-JUL-2001 JP 2001012328

PF 19-JAN-2001 JP 2001012328

PF KISHUMAN SHINICHI HASHIMOTO, SHUICHI KANEKO, TARO PI
                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1. .10 /organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                   Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae, Homon

1 (bases 1 to 10)

Roberts, and Shankara,S.

Preparation and use of superior vaccines

Patent: JP 2002534056-A 11 15-OCT-2002;

GENZYME CORP

FOR Homo sapiens (human)

PN JP 2002534056-A/II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human liver disease-expressing genes
Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BD238593 10 bp DNA Preparation and use of superior vaccines.
                                                             43.8%; Score 7; DB 1;
100.0%; Pred. No. 95;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43.8%; Score 7; DB 1;
100.0%; Pred. No. 95;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                        אט אטר אטר
Human liver disease-expressing genes.
BD166712

    .10
    /organism="unidentified"
/mol_type="genomic DNA"
/db_xref="taxon:32644"

                                                                                                                                                                                                                                                                                                                                                                                               10 bp
      /db_xref="taxon:32644"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                              Query Match
Best Local Similarity 100...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C12P21/08,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C12N15/00
                                                                                                                                                                           1 CGGCGGG 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CGGCGGG 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ceeceee 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YAMASHITA
PC C12N1
PC C12P2
PC C12N1
CC Human
FH Key
FT sourc
                                                                                                                                                                                                                                                                                                                                                                                         BD166712
                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                            RESULT 169
BD166712/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 170
BD238593/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
```

ઠે 셤

ö

Gaps

ö

0; Indels

PAT 17-JUL-2003

linear

PR

60/090040

60/089833 60/080079 E 60/080993 E 60/080991 E 60/090048 E 60/090043 E 60/09034 E

Gaps

```
19-JUN-1998 US 60/090041,19-JUN-1998 US 60/089853 PR 19-JUN-1998 US 60/080011,19-JUN-1998 US 60/080019 PR 19-JUN-1998 US 60/080993 PR 60/080993 PR 60/080993 PR 60/0809993 PR 60/0809993 PR 60/0809993 PR 60/0809993 PR 60/0809993 PR 60/0809993 PR 60/080999 US 60/0809991 PR 60/0809991 PR 19-JUN-1998 US 60/0809991 PR 19-JUN-1998 US 60/0800019-JUN-1998 US 60/0800042 PR 60/0800042 PR 19-JUN-1998 US 60/0800042 PR 60/0809991 PR 60/0800042 PR 19-JUN-1998 US 60/0800043 PR 60/0809991 PR 60/0800042 PR 19-JUN-1998 US 60/0800047 PR 60/0809994 PR 60/0800047 PR 60/0800047 PR 60/0800047 PR 60/0800078,19-JUN-1998 US 60/0800077 PR 60/0800078,19-JUN-1998 US 60/0800077 PR 60/0800078,19-JUN-1998 US 60/080078,19-JUN-1998 US 60/080047 PR PR 60/080078,19-JUN-1998 US 60/080047 PR 60/0800778,19-JUN-1998 US 60/0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; C12N1/21,C12N5/10,G01N33/15,G01N33/50,G01N33/53,G01N33/566,
G01N37/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 60/090 60/089853 F 60/080993 F 60/080993 F 60/080991 F 60/080991 F 60/080984 F 60/08084 F 60/080843 F 60/080843 F 60/080843 F 60/080843 F 60/080843 F 60/080844 F 60/08084 F 60/0808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
                                                                                                                                                                                                                                                                                                                           ö

    .10
    /organism='Homo sapiens (human)'.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 10;
                                                                                                                                                                                                                                                                    Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CINES/00,CIZNS/00,CIZNIS/00

Preparation and use of superior vaccines

Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090039,19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 bp DNA
Preparation and use of superior vaccines.
BD240050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090041, 19-JUN-1998 US
60/090031, 19-JUN-1998 US
60/0900315, 19-JUN-1998 US
60/0900001, 19-JUN-1998 US
60/0900001, 19-JUN-1998 US
60/0900041, 19-JUN-1998 US
60/0900041, 19-JUN-1998 US
60/0900041, 19-JUN-1998 US
60/0900081, 19-JUN-1998 US
60/0900081, 19-JUN-1998 US
60/0900078, 19-JUN-1998 US
60/090078, 19-JUN-1998 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae, Homo.

1 (bases 1 to 10)

Roberts, B.L. and Shankara, S.

Preparation and use of superior vaccines

Patent: JP 2002534056-A 1468 15-OCT-2002,

GENZYME CORP
      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                 Query Match 43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

    .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JUN-1999 JP 2000554749
19-JUN-1998 US 60/0900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens (human)
JP 2002534056-A/1468
15-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BD240050.1 GI:33049820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JP 2002534056-A/1468.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                     GGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
      Key
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                          C12N1/19
      표되답
                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                            10
                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 173
BD240050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                            BRUCE L ROBERTS, SRINIVAS SHANKARA
C12N15/09, C12N15/09, A61K39/00, A61P35/00, A61P37/04, C12N1/15, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BRUCE L ROBERTS, SRINIVAS SHANKARA
C12N15/09, C12N15/09, A61K39/00, A61P35/00, A61P37/04, C12N1/15, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \mathbf{PC}
                                                                                                                                                                                                                                     C12N1/21, C12N5/10, G01N33/15, G01N33/50, G01N33/53, G01N33/566, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 10)
Roberts, B.L. and Shankara, S.
Preparation and use of superior vaccines
Patent: JP 2002534056-A 855 15-OCT-2002;
GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C12N1/21, C12N5/10, G01N33/15, G01N33/50, G01N33/53, G01N33/566,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090040
   60/089833 PR
60/090077 PR
60/090047 PR
60/090045 PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/089853 E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090072
60/089991
60/090048
60/090043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090036 1
60/089844 1
60/089833 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/08993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         770060/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090047
                                                                                                                                                                                                                                                                                                                                                                                        .. .10
'organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GOIN37/00,
C C12N15/00,C12N5/00,C12N15/00
C Preparation and use of superior vaccines
                                                                                                                                                                                                                                                                                                                        Preparation and use of superior vaccines
Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-OCT-2002
18-JUN-1999 JP 2000554749
19-JUN-1998 US 60/090039,19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090041,19-UUN-1998 US
60/090041,19-UUN-1998 US
60/090035,19-UUN-1998 US
60/09992,19-UUN-1998 US
60/09992,19-UUN-1998 US
60/09000,19-UUN-1998 US
60/090042,19-UUN-1998 US
60/090042,19-UUN-1998 US
60/090044,19-UUN-1998 US
60/090081,19-UUN-1998 US
60/090081,19-UUN-1998 US
60/090081,19-UUN-1998 US
60/090078,19-UUN-1998 US
60/090078,19-UUN-1998 US
   us
us
us
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          אמח 10 bp DNA
Preparation and use of superior vaccines.
BD239437
                        60/089994,19-JUN-1998
60/090078,19-JUN-1998
60/090076,19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43.8%; Score 7; DB 1
100.0%; Pred. No. 95;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                            C12N15/00, C12N5/00, C12N15/00
                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                       60/111715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (human)
JP 2002534056-A/855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BD239437.1 GI:33049207
JP 2002534056-A/855.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.
Matches 7; Conservative
19-JUN-1998 US
19-JUN-1998 US
19-JUN-1998 US
19-JUN-1998 US
08-DEC-1998 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
19-70N-1998 US
                                                                                                                                                                                                                               PC C1...
G01N37/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OS Homo sap
PN JP 20025
PD 15-OCT-2
PP 18-JUN-1998
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BRUCE L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 GCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGCCAT 2
                                                                                                                                                                                                          C12N1/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C12N1/19
                                                                                                                                                                                                                                                                                               SSEFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BD239437/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
```

g ઠે

PR

Ы

ö

Gaps

ge20.res

ઠ 셤

```
Eukaryogista, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Buarchontoglires, Primates, Catarrhini, Hominidae, Homo.

1 (bases 1 to 10)
Roberts, B.L. and Shankara, S.
Preparation and use of superior vaccines
Patent: JP 2002534056-A 2124 15-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C12N1/19,
: C12N1/21,C12N5/10,G01N33/15,G01N33/50,G01N33/53,G01N33/56,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C12N15/09, C12N15/09, A61K39/00, A61P35/00, A61P37/04, C12N1/15,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lofton-Day, C., Sledziewski, A., Thomas, J., Day, R.W.,
Tomnes-Priddy, L. and Cardon, K.
Methods and nucleic acids for the analysis of colorectal cell
proliferative disorders
Patent: WO 2005001142-A 200 06-JAN-2005;
                                                                                                                                                                                                                                                                                                                                                 60/090079
60/089993
60/089991
60/090048
60/090048
60/089833
60/089833
60/090047
60/090047
                                                                                                                                                                                                                                                                                                                              60/089853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vaccines
                                                                                                                                                                                                                                                                                                           60/090039, 19-JUN-1998
                                                                                                                                                                                                                                                                                                                                  60/090041.19-JUN-1998 U
60/090941.19-JUN-1998 U
60/090992.19-JUN-1998 U
60/09092.19-JUN-1998 U
60/09090.19-JUN-1998 U
60/090941.19-JUN-1998 U
60/090042.19-JUN-1998 U
60/090084.19-JUN-1998 U
60/090084.19-JUN-1998 U
60/090084.19-JUN-1998 U
60/090084.19-JUN-1998 U
60/090084.19-JUN-1998 U
60/090078.19-JUN-1998 U
60/090078.19-JUN-1998 U
60/090078.19-JUN-1998 U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CI2N15/00,C12N5/00,C12N15/00
Preparation and use of superior vacc
Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROBERTS, SRINIVAS SHANKARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 bp DNA
Sequence 200 from Patent WO2005001142.
CQ986656
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43.8%; Score 7; DB 1100.0%; Pred. No. 95; ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                    JP 2000554749
US 60/09003
                                                                                                                                                                                                                           Homo sapiens (human)
JP 2002534056-A/2124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CQ986656.1 GI:58194573
JP 2002534056-A/2124.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                  18-JUN-1998
                                                                                                                                                                                                                                                                   15-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                19-70N-1998 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BRUCE L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0990990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5555555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ճ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FFFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 176
CQ986656
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                        ORGANISM
                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                           COMMENT
                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | BRUCE L ROBERTS, SRINIVAS SHANKARA | CLINI5/09, C12N15/09, C12N15/09, A61K39/00, A61P35/00, A61P37/04, C12N1/15, PC C12N1/19.
                                                                                                                                                            PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C12N1/21, C12N5/10, G01N33/15, G01N33/50, G01N33/53, G01N33/566, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homlinidae; Homo.

1 (bases 1 to 10)
Roberts, B.L. and Shankara, S.
Preparation and use of superior vaccines
Patent: JP 2002534056-A 1516 15-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090079 1
60/089993 1
60/090072 1
60/089991 1
60/090048 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/089844 1
60/089833 1
60/090077 1
60/090047 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/089853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C12N15/00,C12N5/00,C12N15/00
Preparation and use of superior vaccines
Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090041,19-UUN-1998 US
60/090035,19-UUN-1998 US
60/090035,19-UUN-1998 US
60/090902,19-UUN-1998 US
60/090000,19-UUN-1998 US
60/090000,19-UUN-1998 US
60/090042,19-UUN-1998 US
60/090044,19-UUN-1998 US
60/090081,19-UUN-1998 US
60/090081,19-UUN-1998 US
60/090081,19-UUN-1998 US
60/090081,19-UUN-1998 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090039, 19-JUN-1998
                                                                                                                                                            DNA
vaccines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BD240706 10 bp DNA Preparation and use of superior vaccines. BD240706.1 GI:33050476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
5. 95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches

    10 .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13.8%; Score 7; Ilarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                     Preparation and use of superior BD240098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-OCT-2002
18-JUN-1999 JP 2000554749
19-JUN-1998 US 60/09003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (human)
JP 2002534056-A/1516
                                                                                                                                                                                                                BD240098.1 GI:33049868
JP 2002534056-A/1516.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19 - UN-1998 US
10 - UN-1998 U
                                                                                                                                                                                                                                                                                                                                                                                                                                                               OS Homo sap
PN JP 20025
PP 15-0CT-2
PP 15-0TN-1
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
19-JUN-1998 U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCGGCA 12
                σ
                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G01N37/00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCGGCA 2
                                   9099909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PC
PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SSEEE
                                                                                                               RESULT 174
BD240098/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD240706/c
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                      DEFINITION
                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 175
                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
```

Б М

PR

COMMENT

ö

Gaps

ö

FEATURES

g

PAT 25-JAN-2005

Gaps

ö

PAT 31-JAN-2002

```
C12P21/02,C12P21/08//(C12N5/10,C12R1:91),(C12P21/08,C12R1:91),
C12N15/00,
C12N5/00,C12N15/00,(C12N5/00,C12R1:91)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hominidae, Homo.

E 1 (bases 1 to 10)

S Ganes with human dendritic cell expression
L Patent: JP 200279181-A 277 10-OCT-2000;
SCIENCE & FECH AGENCY
OS Homo sapiens (human)
PN JP 2000279181-A/277
PD 10-OCT-2000
PF 01-APR-1999 JP 1999095481
PI SHINICHI HASHIMOTO, KOJI MATSUSHIMA, TAKUJI SUZUKI PC
C12N15/09, C07K14/475, C07K16/18, C12N15/00
CC
FH Key
Location/Qualifiers
FT source
/organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                         Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 10;
                                                                                                                                                                                                                                                                                                                                                                                          Genes with human dendritic cell expression.
                                                                     Location/Qualifiers
                                                                                                                       1. .10
/organism="synthetic construct"
/mol type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                         43.8%; Score 7; DB 1;
100.0%; Pred. No. 95;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 bp 1
Sequence 36 from patent US 5688662.
174373

    .10
    /organism="Homo sapiens"
    /mol_type="genomic DNA"
    /db_xref="taxon:9606"

                                                                   Key
primer_bind (1). (10).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                 E39744.1 GI:18621835
JP 2000279181-A/277.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:3010514
                                                                                                                                                                                       Query Match
Best Local Similarity 100...
7; Conservative
                                                                                                                                                                                                                                                                               10 GCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                  1 GCATCGT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174373.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown
   22225EF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bource
                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 180
I74373
                                                                                                                                                                                                                                                                                                                                                                 RESULT 179
                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                     E39744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      אמת 10 bp DNA linear PAT 18-JUN-2001 B32445
1832445
1920 D1:13018681
                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                               PAT 24-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            L G1.21.5.1 G1.1.018081

Synthetic construct
Synthetic construct
synthetic construct
cottor sequences; artificial sequences.

E 1 (bases 1 to 10)
S Jun, M. Yusuke, N. and Toshihiro, T.
Mammal-derived tissue specific physiologically active protein
L Patent: JP 2000037190-A 5 08-FEB-2000;
JAPAN TOSACCO INC
OS Artificial Sequence
PN JP 2000037190-A/5
PP 23-UUL-1998 JP 1998225228
PR 23-UUL-1998 JP 1998225228
PR TON NISHIU, YUSUKE NAKAMURA, TOSHIHIRO TANAKA
PC C12N15/09, C07K14/47, C07K16/18, C12N1/19, C12N1/21, C12N5/10, PC
C12N15/02,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JUN NISHIU, YUSUKE NAKAMURA, TOSHIHIRO TANAKA
CIZNI5/09, C07K14/47, C07K16/18, C12N1/19, C12N1/21, C12N5/10, PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Day, K.J., Cottrell, S., Distler, J., Morotti, A., Yamamura, S., Dekker, S., Ocamp, Y. and Devos, T. Methods and nucleic acida for the analysis of gene expression associated with the development of prostate cell proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="synthetic construct"
/mol_type="unassigned DNA"
/db xrefe="taxon:32630"
/noTe="chemically treated genomic DNA (Homo sapiens)"
                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                         ö
                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         43.8%; Score 7; DB 1; Length 10; 100.0%; Pred. No. 95; 0; Indels ive 0; Mismatches 0; Indels
                                                                                                                    Query Match
43.8%; Score 7; DB 1; Length 10;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent: WO 2005054517-A 932 16-JUN-2005;
Epigenomics AG (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                             CS114174 10 bp DNA
Sequence 932 from Patent WO2005054517.
                                                                  /mol_type="unassigned DNA" /db_xref="taxon:9606"
                                                   organism="Homo sapiens"
                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                               CS114174.1 GI:68225719
 Epigenomics AG (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                       5 GGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5 GGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4 GGCCGC 10
                                                                                                                                                                                                                         4 GGGCGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disorders
                                                                                                                                                                                                                                                                                                                                                   CS114174
                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 178
E32445
                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                           RESULT 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                             CS114174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                         ð
                                                                                                                                                                                                                       g
```

PAT 03-APR-1998

ö

Gaps

; 0

```
Query Match
Best Local Similarity 100.
Matches 7; Conservative
                                                                    6 GGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 GGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7 GCGCCAT 13
                                                                                            3 GGCGGCA 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 GCCGCCA 9
                                                                                                                                                                                                                            Unknown.
                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                  RESULT 183
AR351836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 184
AR382218/c
                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 185
                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR610721
                                                                                           g
                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                         PAT 12-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 17-AUG-2003
Unclassified.
1 (bases 1 to 10)
Margolskee,R.F.
Gustducin polynucleotides, vectors, host cells and recombinant
methods
                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 10)
Shimamoto, A., Furuichi, Y., Shibata, Y., Funaki, H., Ohara, E. and
                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                  Watahiki,M.
Method for synthesizing cDNA from mRNA sample
Patent: US 6544736-A 226 08-APR-2003;
Nippon Gene Co., Ltd. and Agene Research Institute Co., Ltd.;
Tokyo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
Unclassified.
1 (bases 1 to 10)
Dobrindt,D. and Fischer,U.
Device for generating an offset of transported flexible sheet
                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                             Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 10;
                                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR351835
Sequence 1640 from patent US 6588746.
AR351835
AR351835.1 GI:33753631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent: US 6588746-A 1640 08-JUL-2003;
NexPress Solutions LLC; Rochester, NY;
                                                                                                                                                                                                                                                                                     AR303501 10 bp DN
Sequence 226 from patent US 6544736.
AR303501. GI:31692277
                                                             Patent: US 568862-A 36 18-NOV-1997,
Location/Qualifiers
                                                                                                                                         Query Match 43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                        1. .10
/organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .10
/organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                    Unknown.
Unclassified.
                                                                                                                                                                                             5 GGGGGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9 GGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 GGCATCG 10
                                                                                                                                                                                                         1 GGGCGGC 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     material
                                                                                                                                                                                                                                                                                                                                                    Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown.
                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                          Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                            RESULT 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 182
                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                               JOURNAL
             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                        AR303501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR351835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                      TITLE
                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

```
1 (bases 1 to 10)
Keinath,A.P., Somai,B.M. and Dean,R.A.
Method of diagnosing gummy stem blight in plants using a polymerase chain reaction assay
Patent: US 6610487-A 5 26-AUG-2003;
Clemson University; Clemson, SC
Location/Qualifiers
                                       ö
                                                                                                                                                                                                 PAT 17-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PAT 18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                     Gaps
                                                                                                                                                                                                                                                                                                                       Unclassified.

1 (bases 1 to 10)

Dobrindt, D. and Fischer, U.

Device for generating an offset of transported flexible sheet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                 linear
                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
   Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 10;
                                                                                                                                                                                              AR351836
Sequence 1641 from patent US 6588746.
AR351836.1
GI:33753632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
43.8%; Score 7; DB 1; 100.0%; Pred. No. 95;
                                                                                                                                                                                                                                                                                                                                                                                                Patent: US 6588746-A 1641 08-JUL-2003;
Nexpress Solutions LLC; Rochester, NY;
DEX;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
           100.0%; Prec. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="unknown"
/mol_type="unassigned DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AR382218 10 bp
Sequence 5 from patent US 6610487.
AR382218 GI:40090630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
```

DEFINITION ACCESSION

ORGANISM

VERSION KEYWORDS SOURCE

REFERENCE AUTHORS

TITLE

; 0

Gaps

ö

PAT 15-DEC-2004

```
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce,J.W.
Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 873 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers
     diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation Patent: US 6825174-A 864 30-NOV-2004; East Carolina University; Greenville, NC Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 10;
                                                                                                                                                 Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Velculescu, V.E., Vogelstein, B. and Kinzler, K.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AR610751 10 bp D1
Sequence 873 from patent US 6825174.
                                                                                                                                                 Query Match
43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10 bp Sequence 367 from Patent WO0138577.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                       1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 43.8%; Score 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX152452.1 GI:14534103
                                                                                                                                                                                                                                                                                                                                                                  AR610751
AR610751.1 GI:56666227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown.
Unclassified.
                                                                                                                                                                                                                                       2555555
                                                                                                                                                                                                                    2555255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9609660
                                                                                                                                                                                                                                                                                                                                                                                                                 Unknown.
                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX152452/c
LOCUS
                                                                                                                                                                                                                                                                                                RESULT 188
AR610751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
TITLE
                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
        PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 15-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT 15-DEC-2004
                                                                                                                                                 Nyce, J.W.

Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation
Patent: US 6825174-A 843 30-NOV-2004;
East Carolina University; Greenville, NC
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 (bases 1 to 10) Nyce, J.W. Composition, formulations & method for prevention & treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Composition, formulations & method for prevention & treatment of diseases and conditions associated with bronchoconstriction, allergy(ies) & inflammation Patent: US 6825174-A 854 30-NOV-2004; East Carolina University; Greenville, NC Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                  .
0
      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 10;
        DNA
                                                                                                                                                                                                                                                                                                                              43.8%; Score 7; DB 1;
100.0%; Pred. No. 95;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 bp Di
Sequence 854 from patent US 6825174.
AR610732.
AR610732.1 GI:56666208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 864 from patent US 6825174.
AR610742.
AR610742.1 GI:56666218
Sequence 843 from patent US 6825174. AR610721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      h 43.8%; Score 7; DB 1
Similarity 100.0%; Pred. No. 95;
7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                   1. .10
/organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .10
/organism="unknown"
                                                    AR610721.1 GI:56666197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unknown.
Unclassified.
1 (bases 1 to 10)
                                                                                                                    Unclassified.
1 (bases 1 to 10)
                                                                                                                                                                                                                                                                                                                                                                7; Conservative
                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                               4 GGCGGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                2 GGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 2999299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown.
                                                                                      Unknown.
                                                                                                      Unknown
```

SOURCE ORGANISM

AUTHORS TITLE

REFERENCE

RESULT 186 AR610732

DEFINITION

ACCESSION VERSION

KEYWORDS

Bource

FEATURES

JOURNAL

ORGANISM

REFERENCE AUTHORS TITLE

DEFINITION

ACCESSION VERSION

KEYWORDS

SOURCE

RESULT 187

원

AR610742

source

FEATURES

JOURNAL

Matches

8

ö

Gaps

ö

PAT 22-JUN-2001

PAT 22-JUN-2001

ઠે 셤

```
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleogtomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                              Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 10;
                                                                                                                                                                                             Velculescu, V.E., Vogelstein, B. and Kinzler, K.W. Human transcriptomes
Patent: WO 0138577-A 924 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jelculescu, V.E., Vogelstein, B. and Kinzler, K.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human transcriptomes
Patent: WO 0138577-A 938 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                          43.8%; Score 7; DB 1
100.0%; Pred. No. 95;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1120 from Patent WO0138577.
                   10 bp 1
Sequence 924 from Patent W00138577.
AXI53009
AXI53009.1 GI:14534660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 bp E Sequence 938 from Patent WO0138577. AXIS3023 AXIS3023.1 GI:14534674
                                                                                                                                                                                                                                                                                 1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

    .10
    /organism="Homo sapiens"
    /mol_type="unassigned DNA"
    /db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX153205.1 GI:14534856
                                                                                                      Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                  Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 GGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GGCGGGC 9
                                                                                                                                                                                                                                                                                                                                                                                                                             2 GGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                   LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 193
AX153023/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 194
AX153205/c
LOCUS
DEFINITION
                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
      AX153009
                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                               PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 22-JUN-2001
                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Gaps
                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 10;
                                                                                                                                                                                                                                                                                                                                   Velculescu, V.E., Vogelstein, B. and Kinzler, K.W. Human transcriptomes
Patent: WO 0138577-A 384 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Velculescu, V.E., Vogelstein, B. and Kinzler, K.W.
                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43.8%; Score 7; DB 1;
100.0%; Pred. No. 95;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
 100.0%; Pred. No. 95; ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human transcriptomes
Patent: WO 0138577-A 923 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 923 from Patent W00138577.
AXI53008.1 GI:14534659
                                                                                                                                                           AX152469 10 bp 1
Sequence 384 from Patent WO0138577.
AX152469.1 GI:14534120
                                                                                                                                                                                                                                                                                                                                                                                                                        1. .10
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                         Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.0
Matches 7; Conservative
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hominidae; Homo.
                                                 8 CGCCATC 14
                                                                     10 CGGCATC 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7 GGGGGGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 2225255
                                                                                                                                         AX152469/C
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 191
AX153008
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                              RESULT 190
                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 192
                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
```

셤

ઠે

ö

Gaps

ö

PEATURES

PAT 22-JUN-2001

ö

Gaps

ö

PEATURES

셤

PAT 22-JUN-2001

```
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                        AX668191.1 GI:29291470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX668192.1 GI:29291471
                                                                                                                                                                                                                                                                                                     synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100...
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 GGCGGCA 12
                                                                                                                                                  4 GGCGGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 GGCGGCA 12
                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GGGGCA 9
                                                                                                                        2 GGCGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                            LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 198
AX668192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
TITLE
                                                                                                                                                                                                RESULT 197
                                                                                                                                                                                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                       KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
KEYWORDS
                                                                                                                                                                                                               AX668191
                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                 PAT 30-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 18-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Euarchontoglires, Primates, Catarrhini,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Myc targets
Patent: WO 0185941-A 190 15-NOV-2001;
Academisch Ziekenhuis bij de Universiteit van Amsterdam (NL)
Location/Qualifiers
   Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                             ô
                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
43.8%; Score 7; DB 1; Length 10;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                              Length 10;
                                             Velculescu, V.E., Vogelstein, B. and Kinzler, K.W.
                                                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1
Kliem,S.E., Koshy,B. and Lanz,E.M.
Haplotypes of the ntf3 gene
Patent: WO 0212499-A 22 14-FEB-2002;
Genaissance Pharmaceuticals, Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                            Human transcriptomes
Patent: WO 0138577-A 1120 31-MAY-2001;
The Johns Hopkins University (US)
Location/Qualifiers
                                                                                                                                                                                              Query Match
43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                          10 bp I
Sequence 190 from Patent W00185941.
AX301476

    .10
    /organism="Homo sapiens"
    /mol_type="unassigned DNA"
    /db_xref="taxon:9606"

    .10
    /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX377358 10 bp
Sequence 22 from Patent WO0212499.
AX377358 GI:19573644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Versteeg, R. and Caron, H.N.
                                                                                                                                                                                                                                                                                                                                                                                                           AX301476.1 GI:17382559
                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                 Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8 CGGCATC 14
                                                                                                                                                                                                                                                         5 GGCCGC 11
                                                                                                                                                                                                                                                                                       7 GGGCGGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 CGGCATC 4
                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
ORGANISM
                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                   RESULT 195
AX301476/c
                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX377358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                               LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rocus
                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                           ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 26-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                    PAT 26-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                   Liu,Q.
Position dependent recognition of gnn nucleotide triplets by zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Liu,Q.
Position dependent recognition of gnn nucleotide triplets by zinc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                     ô
                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 10;
   Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="synthetic construct"
|mol_type="unassigned DNA"
|db_xref="taxon:32630"
|noFe="example target DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1..10
/organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="caxon:32630"
/note="example target DNA"
                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                   fingers
Patent: WO 0242459-A 1640 30-MAY-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fingers
Patent: WO 0242459-A 1641 30-MAY-2002;
Sangamo Biosciences Inc. (US)
Location/Qualifiers
Query Match
43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43.8%; Score 7; DB 1;
100.0%; Pred. No. 95;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                               other sequences; artificial sequences
                                                                                                                                                                                 AX668191 10 bp D)
Sequence 1640 from Patent WO0242459.
AX668191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 bp DN
Sequence 1641 from Patent WO0242459.
AX668192
```

Gaps

ö

ö

PAT 31-JAN-2002

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Bukaryota; Mammalia; Eutheria; Buarchontoglires; Primates; Catarrhini; Homindae; Homo.

1 (Dases 1 to 10)

Matsushima, K., Hashimoto, S. and Suzuki, T.

LPS activated human monocyte expressing genes activated human monocyte expressing genes

LPS activated human monocyte expressing penes

LPS activated human monocyte expressing penes

LPS 201069993-A 262 21-MAR-2001;

JAPAN SCIENCE AND TECHNOLOGY CORP

OS Homo sapiens (human)

PR 20-1069993-A/262

PP 21-MAR-2001

PP 20-1069993-A/262

PP 28-AFR-2000 JP 2000131079

PR SA-PR-2000 JP 2000131079

PR KOJI MATSUSHIMA, SHINICHI HASHIMOTO, TAKUÙI SUZUKI PC

C12N15/09, C07K14/47, C07K16/18, G01N33/50, G01N33/53//A61K45/00, PC

A61P29/00,

CC A61P31/00, C12P21/08, C12N15/00

CC A61P31/00, C12P21/08, C12N15/00

FT source (organism='Homo sapiens (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ce 1..10
/organism='Homo sapiens (human)'.
Location/Qualifiers
                                                                                                                                                                10 bp DNA line
LPS activated human monocyte expressing genes.
BD007986
BD007986.1 GI:18636359
JP 2001065993-A/262.
Homo sapiens (human)
Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43.8%; Score 7; DB 1
100.0%; Pred. No. 95;
cive 0; Mismatches

    .10
    /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: May 9, 2006, 16:42:25 Job time : 0.001 secs
             ö
           7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best_Local Similarity 100.
Matches 7; Conservative
                                                 œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                            DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                           RESULT 201
                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
JOURNAL
           Matches
                                                                                                                                                              BD007986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                LOCUS
                                                 ð
                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OS HOMO sapiens (human)
PN JP 2001069993-A/261
PD 21-MAR-2001
PP 28-APR-2000 JP 2000131079
PP 47 Key Location/Qualifiers
PT Source 1.10
FT //organism='Homo sapiens (human)'.
                                                                                                                   PAT 05-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 31-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BD007985 10 bp DNA linear PAT 31-JAN-200 LDS activated human monocyte expressing genes.
BD007985. GI:18636358
BD007985.1 GI:18636358
JP 2001069993-A/261.
Homo sapiens (human)
Homo sapiens (human)
Homo sapiens Eutheria; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                  Sledziewski, A. and Schweikhardt, R.G. Method for the analysis of cytosine methylation patterns Patent: WO 03064701-A 21 07-AUG-2003; Epigenomics AGG (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ce 1. .10 /organism='Homo sapiens (human)'. Location/Qualifiers
                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hominidae, Homo.

1 (bases 1 to 10)
Matsushima, K., Hashimoto, S. and Suzuki, T.
LPS activated human monocyte expressing genes
Patent: JP 2001069993-A 261 21-MAR-2001;
JAPAN SCIENCE AND TECHNOLOGY CORP
OS Homo sapiens (human)
PN JP 2001069993-A/261
PD 21-MAR-2001
PP 28-APR-2000 JP 2000131079
                                                                                                                                                                                                                                                                                                                                                                                                    /organism="synthetic construct"
|mol_type="unassigned DNA"
|db_xref="taxon:32630"
|note="AP-PCR Primer CG5"
                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 95;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                         synthetic construct
synthetic construct
other sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43.8%; Score 7; DB 1; 100.0%; Pred. No. 95;
                                                                                                             Sequence 21 from Patent W003064701. AX814775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1. .10
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                    AX814775.1 GI:39103969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ||||||||
GGCGGC 10
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 GGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                               LOCUS
DEFINITION
                                                                                                                                                                                                           SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 200
BD007985/c
                                                                            RESULT 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCUS
DEFINITION
                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                     ACCESSION
                                                                                                                                                                        VERSION
KEYWORDS
                                                                                              AX814775
                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                     유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
```

ö

ö

0; Indels Length 10;

```
GenCore version 5.1.8 Copyright (c) 1993 - 2006 Biocceleration Ltd.
```

OM nucleic - nucleic search, using sw model

Run on:

May 9, 2006, 16:43:56; Search time 0.001 Seconds (without alignments) 51.712 Million cell updates/sec

Title: Perfect score:

US-09-904-968A-20-COPY 16 1 cggcgggcggcatcgt 16 Sequence:

Scoring table: IDENTITY NUC Gapext 0.5

Total number of hits satisfying chosen parameters:

140 segs, 1616 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Issued. Patento - NA Post-processing: Maximum Match 108
Maximum Match 1008
Listing first 140 summaries

Database :

issdb20:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		J			SUMMARIES	
Result No.	Score	Query Match	Length	DB	ID	Description
0	12.4	77.5	14	-	US-09-647-344A-19	Sequence 19, Appl
7	11.4	71.2	15	ч	US-08-580-242-5	
m	10.8	67.5	14		US-08-757-024-695	
4	10.8	67.5	14	-	US-09-093-972C-695	Sequence 695, App
ß	10.8	67.5	15	Н	US-08-241-372-8	
9 0	10.8	67.5	15	Н	US-08-241-372-9	6
c 7		67.5	15	-	US-08-293-150A-109	100
80	10.8	67.5	15	Н	US-08-110-294A-2	
0	10.8	67.5	15	Н	US-08-110-294A-3	'n
10	ö	67.5	15	ч	US-08-389-926-2	ζ,
c 11	10.8	67.5	15	٦	US-08-389-926-3	'n
12	10.8	67.5	15	Н	US-08-757-024-673	673
13	10.8	67.5	15	Н	US-08-757-024-694	694
14	10.8	67.5	15	Н	US-09-093-972C-673	673,
15	10.8	67.5	15	Н	US-09-093-972C-694	694,
16	10.8	67.5	15	Н	PCT-US95-05420-8	8, A
c 17	10.8	67.5	-	-	PCT-US95-05420-9	
18	10.4	65.0	1	Н	US-08-757-024-697	69
19	10.4	65.0	1	Н	US-09-093-972C-697	697,
50	10.4	65.0	7	Н	US-08-757-024-675	675,
21	10.4	65.0	13	Н	US-08-757-024-696	969
22	10.4	65.0	-	ч	US-09-093-972C-675	675,
23	10.4	65.0	13	Н	US-09-093-972C-696	,969
24	10.4	65.0	14	Н	US-08-757-024-652	652,
25	10.4	65.0	14	~	US-08-757-024-674	674,
56	10.4	65.0	14	Н	US-09-093-972C-652	652,
27	10.4	65.0	14	٦	US-09-093-972C-674	
28	10	62.5	7	Н	US-09-264-693-10	10,
53	10	62.5	1	ч	US-09-264-693-8	Sequence 8, Appli
30	9.6	61.2	13	Н	US-08-757-024-716	716
31	9.6	61.2	13	Н	US-09-093-972C-716	716,
32	9.6	61.2	14	٦	US-08-757-024-715	715,
33	9.6	61.2	14	٦	US-09-093-972C-715	715,

aquence 699 aquence 718 aquence 738 aquence 68 aquence 68 aquence 68 aquence 67 aquence 71 aquence 73 aquence 73 aquence 73 aquence 73	aquence 753 aquence 753 aquence 753 aquence 753 aquence 756	aquence 73. aquence 77.	aquence 777 aquence 9, aquence 79, aquence 23, aquence 21, aquence 37, aquence 37, aquence 677 aquence 677 aquence 677 aquence 772	ance 30 30 30 30 30 30 30 30 30 30 30 30 30
US-08-757-024-69 US-08-757-024-75 US-08-93-972C-7 US-09-093-972C-7 US-09-093-972C-7 US-09-093-972C-7 US-08-757-024-67 US-08-757-024-75 US-08-757-024-71 US-08-757-024-71 US-08-757-024-73 US-08-757-024-73 US-08-757-024-73 US-08-757-024-73 US-08-757-024-73 US-08-757-024-73	1 US-08-757-024-755 1 US-08-757-024-755 1 US-09-033-972C-751 1 US-09-093-972C-751 1 US-09-093-972C-751 1 US-08-757-024-738 1 US-08-757-024-756 1 US-09-093-972C-751 1 US-09-093-972C-751 1 US-09-093-972C-737 1 US-09-093-972C-737 1 US-09-093-972C-737 1 US-09-093-972C-737	1 US-093-972C- 1 US-08-116-38E-7 1 US-08-726-218-7 1 US-08-77-034A- 1 US-08-777-024-7 1 US-08-757-024-7 1 US-09-097-053-7 1 US-09-093-972C-7 1 US-09-093-972C-7 1 US-09-093-972C-7 1 US-09-093-972C-7 1 US-09-093-972C-7	1 US-08-757-024-77 1 US-09-165-239A-9 1 US-09-165-239A-9 1 US-09-643-677-23 1 US-09-643-677-23 1 US-09-561-997A-4 1 US-09-561-997A-4 1 US-09-093-972C-6 1 US-09-093-972C-7 1 US-08-025-038-23 1 US-08-025-038-23 1 US-08-123-702-5 1 US-08-123-702-5 1 US-08-123-702-5	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 4 4 4 4 4 9 0 0 0 0 0 0 0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	. 4 4 4 4 0 0 0 0 0 0 0 0 0 0 4 4 4 4 4
0 0 0	., _, _, _, _, _, _, _, _, _, _, _, _, _,	000	000000 0	

~

```
RESULT 3
US-08-757-024-695
                                                                                                                                                                                                                                                                                                                                                             ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                         US-08-580-242-5
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                   6, App
Appli
                                                                                                                                                                                                               Appl
                                                                                                                                                                                                                                                        Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                         Sequence
Sequence
Sequence
Sequence
                                                                      Sequence
Sequence
Sequence
                                                                                                                                                                                       Sequence
Sequence
                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                   Sequence
Sequence
                               Sequence
                                         Sequence
                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                            Seguence
                   Sequence
                                                    Sequence
                                                            Sequence
                                                                                                       Sequence
                                                                                                                 Sequence
                                                                                                                                                                  Sequence
                                                                                                                                                                               Sequence
                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               77.5%; Score 12.4; DB 1; Length 14; 92.9%; Pred. No. 8.1; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INC. 6250120);
GENERAL INCRMATION:
APPLICANT: Ruffner, Duane E.
APPLICANT: Chen, Zhidong
TITLE OF INVENTION: Directed Antisense Libraries
FILE REPERENCE: T6678.PCT.US
CURRENT FILING DATE: 2000-12-04
PRIOR PLING DATE: 1999-03-28
NUMBER OF SEQ ID NOS: 50
                                             -09-093-972C-864
-09-093-972C-873
                            US-08-925-767-18
US-09-889-595-18
US-10-228-876-2
                                                                                                                                                                                                                                            -09-056-868B-5
                  JS-08-944-496-18
                                                                                                                                                                                                                                                       US-09-313-434C-5
US-09-508-753B-2
                                                                                                                                                                                                                                                                                                                                -09-263-790-32
                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-647-344A-19/c; Sequence 19, Application US/09647344A; Patent No. 6586180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 2
US-08-580-242-5
'Sequence 5, Application US/08580242
; Patent No. 5683988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: herpes simplex virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGGGGGGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 92.9
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-647-344A-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID NO 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
         0 0 0 0 0 0
                                                                                                                                                                                                              υ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
```

```
Gaps
GENERAL INFORMATION:
APPLICANT: CHUNG, Hun-Taeg
TITLE OF INVENTION: ANTI-SENSE OLIGODEOXYNUCLEOTIDE TO
TITLE OF INVENTION: PIBROGENIC CYTOKINE TGF-beta AND USE THEREOF
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: LOWE PRICE LEBLANC & BECKER
STREET: 99 Canal Center Plaza, Suite 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 11.4; DB 1; Length 15; Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                            COUNTRY: C. COMPUTER READABLE FORM:

ZIP: 22314
COMPUTER READABLE FORM:
MEDIUM TYRE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
CURRENT APPLICATION NUMBER: US/08/580,242
TILING DATE: 28-DEC-1995
TILING DATE: 28-DEC-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL TO COSTANDE TO CONTROL OF THE APPLICANT: Nyce, Jonathan W.

TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952

CORRESPONDENCE ADDRESS:
ADDRESSE: BELL, SELTEER, PARK & GIBSON STREET: P.O. Drawer 34009

CITY: Charlotte STATE: No. 6025339th Carolina

COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/757,024 FILING DATE: 26-NOV-1996 CLASSIFICATION: 514 ATTORNEY/AGENT INFORMATION: NAME: Sibley, Kenneth D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Mills, Demetra J.
REGISTRATION NUMBER: 34,506
TELECOMUNICATION INFORMATION:
TELEPHONE: 703-684-1111
TELEPAX: 703-684-1124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Flopy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 695, Application US/08757024
Patent No. 6025339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      71.2%;
92.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 CGGCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 CGGAGGGCGCAT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 92.3
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 15 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (gen
                                                                                                                                                                                CITY: Alexandria
STATE: Virginia
COUNTRY: USA
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                 Length 14;
                                                                                                                                                                                                                                                           Sequence 8, Application US/08241372;
Sequence 8, Application US/08241372;
GENERAL INFORMATION:
APPLICANT: Dzau, Victor J
APPLICANT: Raneda, Yeasufumi
TITLE OF INVENTION: METHOD FOR IN VIVO DELIVERY OF
TITLE OF INVENTION: THERAPEUTIC AGENTS VIA LIPOSOMES;
NUMBER OF SEQUENCES: 34
CORRESPONDENCE ADDRESS:
ADDRESSEE: FLERY HOHBACH, TEST, ALBRITTON & HERBERT
STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 15;
                                                                                                                                             Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STALE.

COUNTRY: USA

ZIP: 94111-4187

COMPUTER READABLE PORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

CORENTING SYSTEM: PC-DOS/MS-DOS

CURRENT APPLICATION DATA:

CURRENT APPLICATION NUMBER: US/08/241,372

FILING DATE: 09-MAY-1994

FILING DATE: 09-MAY-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 9, Application US/08241372
Patent No. 5631237
GENERAL INFORMATION:
APPLICANT: Dau, Victor J
APPLICANT: Kaneda, Yassufumi
TITLE OF INVENTION: METHOD FOR IN VIVO DELIVERY OF
                                                                                                 Score 10.8; DB 1;
Pred. No. 18;
                                                                               67.5%; Scor.
85.7%; Pred. No. 10,
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 10.8; DB
Pred. No. 19;
0; Mismatches
             ; MOLECULE TYPE: DNA (genomic)
; SEQUENCE DESCRIPTION: SEQ ID NO: 695:
US-09-093-972C-695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Rowland, Bertram I
REGISTRATION NUMBER: 20,015
REFERENCE/DOCKET NUMBER: A-5
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (415) 398-3249
TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 15 base pairs
TYPE: nucleic acid
                                                                                                                                                                                    2 GGCGGGCGCCATCG 15
                                                                                                                                                                                                               1 GGAGGCGCCATGG 14
                                                                                 Query Match
Best Local Similarity 85.79
warches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGGGCGCCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 85.79
Whiches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: lir
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
US-08-241-372-9/c
                                                                                                                                                                                    ð
                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                               DB 1; Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: OSS12

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/77,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/72,527
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/72,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/72,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/72,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/72,527
                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 30-January 1998
ATTORNEY AGENT INFORMATION:
NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                             Score 10.8;
Pred. No. 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 655, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
                              5218-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
REGISTRATION NUMBER: 31,665
REFERENCE/DOCKET NUMBER: 5218-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
TELEFAX: 919-881-3175
TELEFAX: 975102
INFORMATION FOR SEQ ID NO: 695:
SEQUENCE CHARACTERISTICS:
LENGTH: 14 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 413-254-9245
TELEX: «Unfanom»
INFORMATION FOR SEQ ID NO: 695:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 14 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                           , MOLECULE TYPE: DNA (genomic)
US-08-757-024-695
                                                                                                                                                                                                                                                                                                                           Query Match 67.5%;
Best Local Similarity 85.7%;
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                               2 GGCGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGAGGGCGCCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-093-972C-695
                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
3 GCGGGCGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 85...
Best Local Similarity 85...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15 GCAGGCGGCGTCGT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 312-715-1234
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-110-294A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
NUBURANCH MEABLILD
TITLE OF INVENTION: POLYPEPTIDE, DNA FRAGMENT ENCODING THE
TITLE OF INVENTION: SAME AND PROCESS FOR PRODUCING THE SAME, AND ENZYME
TITLE OF INVENTION: INHIBITION PROCESS, DRUG COMPOSITION AND METHODS OF
TITLE OF INVENTION: TREATING USING THE SAME
NUMBER OF SEQUENCES: 110
CORRESPONDENCE ADDRESS:
STREET: P.O. BOX 1404
CITY: Alexandria
STREET: P.O. BOX 1404
COUNTRY: United States
COU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 10.8; DB 1; Length 15; Pred. No. 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
TITLE OF INVENTION: THERAPEUTIC AGENTS VIA LIPOSOMES NUMBER OF SEQUENCES: 34
CORRESPONDENCE ADDRESS:
ADDRESSE: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT STREET: 4 Embarcadero Center, Suite 3400
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                  STATE: CALIFORNIA

ZIP: 94111-4187

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM:
PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
PPLICATION NUMBER: US/08/241,372
FILING DATE: 09-MAY-1994
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: ROWADANA, ESPETAM I
REGISTRATION NUMBER: 20,015
REFERENCE/DOCKET NUMBER: A-S9079-1/BIR
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFAX: (415) 798-1289
TELEFAX: (415) 798-1289
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LEMETH: 15 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-293-150A-109/c
; Sequence 109, Application US/08293150A
; Patent No. 5792629
; GENERAL INFORMATION:
APPLICANT: MONEISHITA, Hideaki
APPLICANT: KANAMORI, Toshinori
APPLICANT: NOBUHARA, Masahiro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15 GGAGGCGGCATGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 67.5:
Best Local Similarity 85.7
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , MOLECULE TYPE: CDNA
US-08-241-372-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application US/08110294A
Patent No. 5821234
GENERAL INFORMATION:
APPLICANT: DZAU, Victor J
TITLE OF INVENTION: Inhibition of Proliferation of Vascular
TITLE OF INVENTION: Smooth Muscle Cell
NUMBER OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Allegretti & Witcoff, Ltd.
STREET: 10 South Wacker Dr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA

ZIP: 60606
COMPUTER READBLE FORM:
MEDIUW TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/110,294A
FILING DATE: 20-AUG-1993
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/063,980
FILING APPLICATION DATA:
APPLICATION NUMBER: US 07/944,882
RICH APPLICATION DATE: 19-MAY-1993
RICH APPLICATION DATE: 10-REP-1992
ATTORNEY/AGENT INFORMATION:
NAME: MCDORNEIL, John J
REGISTRATION NUMBER: 26,949
REGERENCE/DOCKET NUMBER: 93,510-B
TELEPHONE: 1312-715-1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 10.8; DB; Pred. No. 19; 0; Mismatches
APPLICATION NUMBER: US 07/791,213
FILING DATE: 13-NOV-1990
FILING DATE: 13-NOV-1990
APPLICATION NUMBER: UP 2-306745
FILING DATE: 13-NOV-1990
ATTORNEY, AGENT INFORMATION:
NAME: Meuth, Donna M.
REGISTRATION NUMBER: 36,607
REFERENCE, DOCKET NUMBER: 029650-049
TELECHONEY (703) 836-6620
TELECHONE: (703) 836-6620
TELECHONE: (703) 836-6201
INFORMATION FOR SEQ ID NO: 109:
SEQUENCE CHARACTERISTICS:
LENGTH: 15 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY: linear; MOLECULE TYPE: DNA (genomic) US-08-293-150A-109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67.5%;
```

nucleic acid

```
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: II
COUNTRY:
                                                                                                                                                                                       STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                  Sequence 3, Application US/08110294A
Patent No. 5821234
GENERAL INFORMATION:
APPLICANT: Daw, Victor J
TITLE OF INVENTION: Inhibition of Proliferation of Vascular
TITLE OF SEQUENCES: 49
CORRESPONDENCE ADDRESS:
ADDRESSEE: Allegretti & Witcoff, Ltd.
STREET: 10 South Wacker Dr.
CITY: Chicago
                                                                                           DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 10.8; DB 1; Length 15; Pred. No. 19;
                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CUMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/110,294A
FILING DATE: 20-AUG-1993
CLASSIFICATION: 514
PRIOR DATE: 19-MAY-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/063,980
FILING DATE: 19-MAY-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/063,980
FILING DATE: 10-SEP-1992
ATFORDER/AGBRIT INFORMATION:
APPLICATION NUMBER: US 07/944,882
FILING DATE: 10-SEP-1992
ATFORDER/AGBRIT INFORMATION:
                                                                                         Score 10.8; D. Pred. No. 19; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: McDonnell, John J
REGIGSTRATION NUMBER: 26,949
REFRENCE/DOCKET NUMBER: 93,510-B
TELEPHONE: 312-715-1000
TELEPHONE: 312-715-1334
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Sequence 2, Application US/08389926
                                                                                         67.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                67.5%;
85.7%;
                                                                                                                                                              2 GGCGGCGCCATCG 15
                                                                                                                                                                                              1 deaddecceccared 14
                                                                                  Query Match
Best Local Similarity 85.73
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15 GGAGGCGGCATGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 67.5
Best Local Similarity 85.7
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TOPOLOGY: linear; MOLECULE TYPE: cDNA
US-08-110-294A-3
                      linear
STRANDEDNESS:
TOPOLOGY: lin
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                  RESULT 9
US-08-110-294A-3/c
                                                  US-08-110-294A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
US-08-389-926-2
                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ô
APPLICATE Distriction Victor J
TITLE OF INVENTION: Inhibition of Proliferation of Vascular
TITLE OF INVENTION: Smooth Muscle Cell
WUMBER OF SEQUENCES: 53
CORRESPONDENCE ADDRESS:
ADDRESSE: Banner & Allegretti, Ltd.
STREET: 10 South Wacker Dr.
CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 11
US-08-389-926-3/c
US-08-389-926-3/c
Sequence 3, Application US/08389926
Patent No. 5869462
GENERAL INFORMATION:
TITLE OF INVENTION: Inhibition of Proliferation of Vascular TITLE OF INVENTION: Smooth Muscle Cell
NUMBER OF SEQUENCES: 53
CORRESPONDENCE ADDRESS:
ADDRESSEE: Banner & Allegretti, Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indele
                                                                                                                                     Score 10.8; 1
Pred. No. 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Banner & Allegretti, Ltd.
STREET: 10 South Wacker Dr.
CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67.5%; Sco...
85.7%; Pred
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: McDonnell, John J
REGISTRATION NUMBER: 26,949
REFERENCE/DOCKET NUMBER: 93,51
TELECOMMUNICATION INFORMATION:
TELEPRAK: 312-715-1000
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 15 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 60606
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMpatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGAGGGCGCCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 67.5
Best Local Similarity 85.7
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TOPOLOGY: linear; MOLECULE TYPE: CDNA
US-08-389-926-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IL
· USA
```

Page

ö

```
Sequence 673, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION & TITLE OF INVENTION: COMPOSITION OF DISEASES & CONDITIONS ASSOCIATED WITH
                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY:
STATE: No. C.
COUNTRY: USA
ZIP: 28234
COMPUTER: ELOPPY disk
MEDIUM TYPE: FLOPPY disk
COMPUTER: ELOPPY di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Wyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON
STREET: P.O. Drawer 34009
CITY: Charlotte
STATE: Wo. 6025339th Carolina
COUNTY: USA
                                                                                                                                                                         Query Match 67.5%; Score 10.8; DB 1; Best Local Similarity 85.7%; Pred. No. 19; Matches 12; Conservative 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 10.8; D
Pred. No. 19;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-757-024-694; Sequence 694, Application US/08757024; Patent No. 6025339
; TYPE: nucleic acid
; STRANDENNESS: single
TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-757-024-673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGCGCCATCG 15
                                                                                                                                                                                                                                                                                           2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                         2 GGAGGGCGCCATGG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 85.7%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 14
US-09-093-972C-673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-757-024-694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                d
                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 10.8; DB 1; Length 15;
Pred. No. 19;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 673, Application US/08757024
Patent No. 6025339
GENERAL INFORMATION:
APPLICANT: Myce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELIZER, PARK & GIBSON
STREET: P.O. Drawer 34009
                                   SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                              APPLICATION NUMBER: US/08/389,926
FILING DATE: 16 FEB 1995
CLASSIPICATION: 144
FRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/063,980
FILING DATE: 19-MAY-1993
CLASSIFICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 07/944,882
FILING DATE: 10-SEP-1992
ATTORNEY AGENT INFORMATION:
NAME: MCDONNell, John J
REGISTATION NUMBER: 26,949
REFERENCE/DOCKET NUMBER: 93,510-D
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
SEQUENCE CHARACTERISTICS:
        PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Charlotte
STATE: No. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 85.7%;
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: 575102
INFORMATION FOR SEQ ID NO: 6
SEQUENCE CHARACTERISTICS:
LENGTH: 15 bare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15 GGAGGCGGCATGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 15 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-757-024-673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-389-926-3
```

ò В

```
ATTORNEY/AGENT INFORMATION:
NAME: Rowland, Bertram I
REGISTRATION NUMBER: 20,015
REFERENCE/DOCKET NUMBER: FP-59079-1/BIR
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                          NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
      COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: «Unknown»
INFORMATION FOR SEQ ID NO: 694:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 15 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28 April 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGAGGGCGCCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 85.7*
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: San Francisco
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 2 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCT-US95-05420-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 694, Application US/09093972C
Sequence 694, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BROWCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 10.8; DB 1; Length 15; Pred. No. 19;
                                                                                                                                                                                                            MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC compartible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) SEQUENCE DESCRIPTION: SEQ ID NO: 673:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 673:
SEQUENCE CHARACTERISTICS:
LENGTH: 15 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67.5%;
85.7%;
                                                                                                                                                                                          COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 ddadddddddd 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 67.5
Best Local Similarity 85.7
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                        ZIP: 08512
                    NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-093-972C-673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
US-09-093-972C-694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IndelB
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 8, Application PC/TUS9505420
GENERAL INFORMATION:
APPLICANT: Dzau, Victor J
APPLICANT: Raneda, Yasufumi
TITLE OF INVENTION: THERAPEUTIC AGENTS VIA LIPOSOMES
NUMBER OF SEQUENCES: 34
COMMESSEPONDENCE ADDRESS:
ADDRESSEE: FLERR, HOHBACH, TEST, ALBRITTON & HERBERT
STREET: 4 Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 94111-4187
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: BE PCOMPUTER: COMPUTER: COMPUTER: PATENTING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/05420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5;
                                                                                                                                              PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-JUNE-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-JUNE-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-JANUARY-1998
ATTORNEY/AGENT INFORMATION:
                                                                        APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: BPI-00672
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 10.8; I
Pred. No. 19;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TOPOLOGY: Bingle
; MOLECULE TYPE: DNA (genomic)
; SEQUENCE DESCRIPTION: SEQ ID NO: 694:
US-09-093-972C-694
```

ω

```
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                   Score 10.8; DB 1; Length 15; Pred. No. 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 10.8; DB 1; Length 15;
Pred. No. 19;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: FLEHR, HOHBACH, TEST, ALBRITTON & HERBERT STREET: 4 Embarcadero Center, Suite 3400 CITY: San Francisco STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                  PCT-US95-05420-9/c
Sequence 9, Application PC/TUS9505420
GENERAL INFORMATION:
APPLICANT: Dzau, Victor J
APPLICANT: Eneda, Yasufumi
TITLE OF INVENTION: METHOD FOR IN VIVO DELIVERY OF
TITLE OF INVENTION: THERAPEUTIC AGENTS VIA LIPOSOMES
NUMBER OF SEQUENCES: 34
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:

MEDIUM TYPE: FORM:

MEDIUM TYPE: FIDPPY disk

COMPUTER: IBM PC Compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: PC-TUS95/05420

FILING DATE: 28 April 1995

CLASSIFICATION:

ATONINY/AGENT INFORMATION:

NAME: RESERVENCE/DOCKET NUMBER: 20,015

REGISTRATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION 1898-3249
                                                                                                                                                                                                                                                                                    Mismatches
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 8: SEQUENCE CHARACTERISTICS: LENGTH: 15 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                           67.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 15 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                      2 GGCGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                   1 GGAGGGCGCCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15 GGAGGCGCCATGG 2
                                                                                                                                                                                                                                       Query Match
Best Local Similarity 85.7
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 85.7
Matches 12, Conservative
                                                                                                                                                                                MOLECULE TYPE: CDNA PCT-US95-05420-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: linear
; MOLECULE TYPE: CDNA
PCT-US95-05420-9
                                                                                                                                                                linear
                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    쉽
```

RESULT 18

```
RESULT 19
US-09-093-972C-697
US-09-093-972C-697

Sequence 697, Application US/09093972C

Patent No. 6825174

GENERAL INFORMATION:

APPLICANT:

TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION

TITLE OF INVENTION:

BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                CUDNIAL
ZIP: 28234
ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CORREATING SYGTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
TRESTICATION: 514
                                                             APPLICATE NYCE, JONATHAN W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 34009
CITY: Charlotte
CITY: Charlotte
CITY: No. 6025339th Carolina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 10.4; DB
Pred. No. 18;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
Sequence 697, Application US/08757024 Patent No. 6025339 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFRERNCE/DOCKET NUMBER: 5218:
TELECOMMUNICATION INFORMATION:
TELEPAX: 919-881-3140
TELERAX: 919-881-3175
TELEX: 575102
INFORMATION FOR SEQ ID NO: 697:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
TYPE: nucleic acid
STRANDENESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
ZIP: 08512
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)
US-08-757-024-697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65.0%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGAGGGGGGGAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
```

```
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
US-08-757-024-675
                                                                                                                                                                                 11; Conservative
                                                                                                                                                                                                                               2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                        2 GGAGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGAGGGCGGCAT 12
         nucleic acid
                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 22
US-09-093-972C-675
                                                                                                                                                                                                                                                                                                                                     RESULT 21
US-08-757-024-696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                      Matches
                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1; Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA

ZIP: 28234

ZIP: 28234

COMPUTER READBLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM FC compatible

OFFRATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/757,024

FILING DATE: 26-NOV-1996

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: Sibley, Kenneth D.

REGISTRATION NUMBER: 31,665

REGISTRATION NUMBER: 5218-41

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELEFRAX: 919-881-3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SUBUNCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 34009
CITY: Charlotte
STATE: No. 6025339th Carolina
COUNTRY: USA
                                                                                  FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
FILING DATE: 09-Jun-1998
CLASSIFICATION: «Unknown»
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 65.0%; Score 10.4; 18est Local Similarity 91.7%; Pred. No. 18; Matches 11; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 697:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 675, Application US/08757024
Patent No. 6025339
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 609-409-3035
TELEFAX: 413-254-9245
TELEX: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 697:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 12 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 13 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGCGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGAGGGGGGGAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-093-972C-697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-757-024-675
```

```
Sequence 675, Application US/09093972C
Patent No. 6625174
GENERAL INPORMITION:
APPLICANT: Nyce, Johathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
  DB 1; Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1; Length 13;
                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                               Sequence 656, Application US/08757024
; Patent No. 6025339
; GENERAL INFORMATION:
APPLICANT: Wyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
DDRESSEE BELL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: Wo. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                1;
Score 10.4; D
Pred. No. 20;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 10.4;
Pred. No. 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: DNA (genomic)
```

```
11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGAGGGCGCCAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-093-972C-696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 24
US-08-757-024-652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       & TREATMENT OF DISFASES & CONDITIONS ASSOCIATED WITH BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 23
US-093-972C-696
; Sequence 696, Application US/09093972C
; Sequence 696, Application US/09093972C
; Patent No. 6825174
; GENERAL INFORMATION:
; APPLICANT: Nyce, Jonathan W.
; APPLICANT: Nyce, Jonathan W.
; TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
; TITLE OF INVENTION: CAMPOSITION, ALLERGY(IES) & INFLAMMATION
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                  COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
CORPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFTCATION: cUnknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/77,024
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 7-June-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65.0%; Score 10.4; DB 1; Length 13; 91.7%; Pred. No. 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
CITY: Cranbury
                                                            ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear

MOLECULE TYPE: DNA (genemic)

SEQUENCE DESCRIPTION: SEQ ID NO: 675:
US-09-093-972C-675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 08512
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 13 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 675:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: New Jersey
COUNTRY: USA
                                                                                                                             STATE: New Jersey
COUNTRY: USA
                  NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGAGGCCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGCGCCAT 13
                                                                                                          CITY: Cranbury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 11; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <UNknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 622, Application US/08757024
| Patent No. 6025339
| GENERAL INFORMATION:
| GENERAL INFORMATION:
| TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA |
| NUMBER OF SEQUENCES:
| CORRESPONDENCE ADDRESS:
| ADDRESSEE: BELL, SELTZER, PARK & GIBSON |
| STREET: P.O. Drawer 34009 |
| CITY: Charlotte |
| STATE: USA |
| COUNTRY: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 65.0%; Score 10.4; DB 1;
Best Local Similarity 91.7%; Pred. No. 20;
                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-Unne-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-Unne-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REBERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 696:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFRENCE/DOCKET NUMBER: 5218
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 13 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 696
SEQUENCE CHARACTERISTICS
```

```
Patent No. 6825174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 27
US-09-093-972C-674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                             DB 1; Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 10.4; DB 1; Length 14;
Pred. No. 22;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: 1BM PC compatible FORM: MEDIUM TYPE: FILEPOPY disk COMPUTER: 1BM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: 4PPLICATION NUMBER: US/08/757,024 FILING DATE: 26-NOV-1996 CLASSIFICATION: 514 ATTORNEY/AGENT INFORMATION: NAME: Sibley, Kenneth D. REGISTRATION NUMBER: 31,665 REFERENCE/DOCKET NUMBER: 5218-41 TELEPOMINICATION INFORMATION: TELEPOMINICATION INFORMATION: TELEPOMINICATION INFORMATION: TELEPOMINICATION: 1919-881-3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                           Score 10.4; Di
Pred. No. 22;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE: BLL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 34009 CITY: Charlotte CITY: No. 6025339th Carolina COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Sequence 652, Application US/09093972C
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 674, Application US/08757024 Patent No. 6025339 GENERAL INFORMATION:
                                                                                                                                           TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)
US-08-757-024-652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; MOLECULE TYPE: DNA (genomic) US-08-757-024-674
                                                                                                                                                                                                                       Query Match
Best Local Similarity 91.7%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 91.7%;
Matches 11; Conservative
TELEFAX: 919-881-3175
TELEX: 575102
INFORMATION FOR SEQ ID NO: 6
SEQUENCE CHARACTERISTICS:
LENGTH: 14 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                             3 GGAGGCGGCAT 14
                                                                                                                                                                                                                                                                                                       2 GCCGGCCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 14 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 28234
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 26
US-09-093-972C-652
                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-757-024-674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
```

```
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INCORMATION:
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                       ZIP: 08512
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBW PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                            ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESS:
ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
CITY: Cranbury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/472,527

FILING DATE: 7-Unne-1995

APPLICATION NUMBER: US 08/757,024

FILING DATE: 26-11-1996

APPLICATION NUMBER: US 08/472,527

FILING DATE: 7-Unne-1995

APPLICATION NUMBER: US 09/016,464

FILING DATE: 30-4anuary-1998

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <UNKnown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECCOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 10.4;
Pred. No. 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 652:
US-09-093-972C-652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 674, Application US/09093972C Patent No. 6825174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 14 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: 652:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 65.0%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
                                                                                                               NUMBER OF SEQUENCES: 9:
                                                                                                                                                                                                                           STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 GGCGGCCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GGAGGCCGCAT 14
                                                                                                                                                                                                          CITY: Cranbury
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 11; Conserv
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Description of Artificial Sequence: caveolin OTHER INFORMATION: promoter sequence at -139 to -159 bp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   62.5%; Score 10; DB 1; Length 12; 100.0%; Pred. No. 22; artive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Fielding, Christopher E
APPLICANT: Fielding, Phoebe E
APPLICANT: Fielding, Phoebe E
ITILE OF INVENTION: REGULATION OF THE CEL CYCLE BY STEROLS
FILE REFERENCE: 2500.141US1 Regulation of cell cycle
CURRENT FALING DATE: 1999-03-08
EARLIER APPLICATION NUMBER: 60/077,351
EARLIER APPLICATION NUMBER: 60/077,351
EARLIER APPLICATION NUMBER: 2000 NUMBER: 1999-03-09
NUMBER OF SEQ ID NOS: 10
SOFTWARE: PATENTIN VET. 2.0
                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-75-024-716

Sequence 716, Application US/08757024

Sequence 716, Application US/08757024

Patent No. 6025339

GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA

NUMBER OF SEQUENCES: 952

CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON
STREET: P.O. Drawer 34009

CITY: CHAIOtte CAROLOTE
STRATE: No. 6025339th Carolina

COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPOTER: IBM PC compatible
COMPOTER: IBM PC compatible
COMPOTER: IBM PC compatible
COMPOTER: IBM PC compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/DOCKET NUMBER: 5218-41
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 199-881-3140
TELEEPHONE: 919-881-3175
     Pred. No. 18; ; Mismatches
                                                                                                                                                                                                                                                                           ; Sequence 8, Application US/09264693; Patent No. 6261760
Best Local Similarity 100.0%; Pr
Matches 10; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                  2 GGCGGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                  US-09-264-693-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-264-693-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 30
                                                                                        ઠે
                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE: OTHER INFORMATION: Description of Artificial Sequence: Sp1-like OTHER INFORMATION: binding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10, Application US/09264693
; Sequence 10, Application US/09264693
; Patent No. 6261760
; GENERAL INFORMATION:
; APPLICANT: Fielding, Christopher E
; APPLICANT: Fielding, Phoebe E
; TITLE OF INVENTION: REGULATION OF THE CEL CYCLE BY STEROLS
; FILE REFERRING: 2500.141US1 Regulation of cell cycle
; CURRENT FILING DATE: 1999-03-08
; EARLIER APLICATION NUMBER: 60/077,351
; BARLIER PILING DATE: 1998-03-09
; SOFTWARE: PatentIN Ver. 2.0
; SEQ ID NO.10
; ELENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 65.0%; Score 10.4; DB 1; Length 14; Best Local Similarity 91.7%; Pred. No. 22; Matches 11; Conservative 0; Mismatches 1; Indels
                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMBUTER: IBM PC compatible
COMBUTER: IBM PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 7-June-1998
ATTORNEY/AGENT INFORMATION:
MAND: ARMER : US 09/016,464
FILING DATE: 3-January-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62.5%; Score 10; DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)

SEQUENCE DESCRIPTION: SEQ ID NO: 674:
US-09-093-972C-674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: «Unknown»
MATION FOR SEQ ID NO: 674:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 14 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGAGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-264-693-10
```

g

Query Match

```
APPLICANT: Nyce, Jonathan W.

IITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION

& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
               Gaps
               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1; Length 14;
               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Indels
                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: NYCe, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE BELL, SELTZER,
STREET: P.O. DIAWET 34009
CITY: Charlotte
STRATE: NO. 6025339th Carolina
COUNTRY: USA
ZIP: 28234
COMPUTER: PLOPPY disk
COMPUTER: PLOPPY disk
COMPUTER: PLOPPY disk
COMPUTER: PLOPPY SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PALENTIN Release #1.0, Version #1.30
CURRET APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNY APPLICATION NUMBER: 31,665
REGISTRATION: NUMBER: 31,665
REGISTRATION INFORMATION:
NAME: SIDLEY, Kenneth D.
REGISTRATION INFORMATION:
TELEPHONE: 919-881-3175
TELEFAX: 919-881-3175
TELEFAX: 919-881-3175
TELEFAX: 919-881-3175
TELEFAX: 919-881-3175
TELEFAX: 919-881-3175
TELENGTH: H base pairs
TVPR: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
               ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 9.8; DB pred. No. 29; 0; Mismatches
             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 715, Application US/09093972C Patent No. 6825174 GENERAL INFORMATION;
                                                                                                                                                            US-08-757-024-715
; Sequence 715, Application US/08757024
; Patent No. 6025339
; GENERAL INFORMATION:
             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-757-024-715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 61.2%;
Best Local Similarity 84.6%;
Matches 11; Conservative
                                                 3 GCGGCGGCATCG 15
                                                                                    1 GAGGGCGGCATGG 13
           11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-093-972C-715
           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 33
                                                 ઠે
                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                                                                             Sequence 716, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 9.8; DB 1; Length 13; Pred. No. 27; 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61.2%; Score 9.8; DB 1; Length 13; 84.6%; Pred. No. 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)

SEQUENCE DESCRIPTION: SEQ ID NO: 716:
US-09-093-972C-716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: 609-409-3035
TELEPAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 716:
SEQUENCE CHARACTERISTICS:
LENGTH: 13 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                            TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                       Query Match
Best Local Similarity 84.6%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Cranbury
STATE: New Jersey
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 13 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                1 GAGGCCGCATGC 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEX: <Unknown>
                                                                                                                                                                                                                                                    3 GCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                 US-09-093-972C-716
                                                                                                                                    US-08-757-024-716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                    요
```

```
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                             MOLECULE TYPE: DNA (genomic)
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 58.7
Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                          10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEX: 575102
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 11 base pairs
                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                         2 GGCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGAGGGCGCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                    US-08-757-024-698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                              q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61.2%; Score 9.8; DB 1; Length 14; 84.6%; Pred. No. 29; Live 0; Mismatches 2; Indels
         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: TEM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <UNKnown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 698, Application US/08757024
; Patent No. 6025339
; GENERAL INFORMATION:
APPLICANT: NYCe, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952
CORRESPONDENCE: 952
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: Wo. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 25234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                            PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/472,527

FILING DATE: 7-JUNE-1995

APPLICATION NUMBER: US 08/757,024

FILING DATE: 26-11-1996

APPLICATION NUMBER: US 08/472,527

FILING DATE: 30-JUNE-1995

APPLICATION NUMBER: US 09/016,464

FILING DATE: 30-JUNE-1998

ATTORNEY/AGENT INFORMATION:

NAME: AMAZA, Viviana

REGISTRATION NUMBER: 30,930

REFERENCE/DOCKET NUMBER: BPI-00672

TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) SQUENCE DESCRIPTION: SEQ ID NO: 715: US-09-093-972C-715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 715: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Sibley, Kenneth D. REGISTRATION NUMBER: 31,665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 14 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 84.6'
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GCGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GAGGGCGCCATGG 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-757-024-698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

```
TELECROMONICATION INTOMATION:
TELEGRAMONICATION INTOMATION:
TELEGRAMONICATION INTOMATION:
TELEGRAMONICATION INTOMATION:
TELEGRAMONICATION INTOMATION:
TELEGRAMONICATION:
TELEGRAMONICATION:
TELEGRAMONICATION:
TELEGRAMONICATION:
TOPELLOCAT:
THIRD OF THE INTOMATION:
TOPELLOCAT:
THIRD OF THE INTOMATION:
THIRD OF THE THIR
```

```
APPLICATION NUMBER: US/09/093,972C
                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 698:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 11 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 GGCGGCCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGAGGGCGGCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  & TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 37
US-09-093-972C-698
; Sequence 698, Application US/09093972C
; Patent No. 6925174
; Patent No. 6925174
; Patent No. 6925174
; TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
; TITLE OF INVENTION: COMPOSITION, PORMULATIONS & METHOD FOR PREVENTION
; TITLE OF INVENTION: COMPOSITION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 27; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                           Sequence 755, Application US/08757024
Patent No. 6025339
GENERAL INFORMATION:
APPLICANT:
NUMBER OF SEQUENCES:
CORRESPONDERES BELL, SELIZER, PARK & GIBSON
STREET: P.O. Drawer 34009
CITY: Charlotte
COUNTRY: USA
                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IRM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/POCKET NUMBER: 31,665
REFERENCE/POCKET NUMBER: 5218-41
TELEFANICATION: INFORMATION:
TELEFANICATION INFORMATION:
TELEFANICATION SIP-981-3175
TELEFANICATION: 1919-881-3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 11 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGGCGCCATGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S GGGGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS
      US-08-757-024-755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-757-024-755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

APPLICANT: Nyce, Jonathan W.

IITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION ö 58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 27; tive 0; Mismatches 1; Indela COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
APPLICATION NUMBER: US/09/093,972C
FLIANG DATE: 09-Jun-1998
CLASSIFICATION: <Unknown> NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive FILING DATE: 09-Jun-1998
CLASSIFICATION: «Unknown»
PRIOR APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/757,024
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INPORMATION:
NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: BI-00672
TELECOMMUNICATION INPORMATION:
TELECOMMUNICATION INPORMATION:
TELECOMMUNICATION INPORMATION: FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 08/472,527 TOPOLOGY: linear

MOLECULE TYPE: DNA (genemic)

SEQUENCE DESCRIPTION: SEQ ID NO: 698:
US-09-093-972C-698 RESULT 38
US-09-093-972C-718
; Sequence 718, Application US/09093972C
; Patent No. 6825174
; GENERAL-INFORMATION:

Gaps

```
/product= "amino terminal addition"
/note= "preferable amino acids to be added to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label= 5'_extension
/note= "preferable additional amino terminal
codons for peptide protease inhibitors"
                                                                                                                                                                                                 ;
0
                                                                                                                                                       Score 9.4; DB 1; Length 11;
Pred. No. 27;
                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
APPLICATION DATA:
APPLICATION UNMER: US/07/972,387
FILING DATE: 19921105
                                                                                                                                                                                             0; Mismatches
                                                      TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)

SEQUENCE DESCRIPTION: SEQ ID NO: 755:
US-09-093-972C-755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1110-124P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 435
ATTORNEY/AGENY INFORMATION:
NAME: MUTDHY Jr., Gerald M.
REGISTRATION NUMBER: 28,977
REFRENCE/DOCKET NUMBER: 1110
TELECOMMUNICATION INFORMATION:
TELEFAX: 703-241-1300
TELEFAX: 703-241-1300
TELEFAX: 24345
INFORMATION FOR SEQ ID NO: 68:
SEQUENCE CHARACTERISTICS:
    LENGTH: 11 base pairs
                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                         58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: DNA (genomic)
                                                                                                                                             Query Match
Best Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 12 base pairs
TYPE: NUCLEIC ACID
STRANDEDNESS: double
                                                                                                                                                                                                                                      5 GGCGGCATCG 15
                                                                                                                                                                                                                                                                            1 GGGCGGCATGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: -.12
LOCATION: 1..12
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: 1..12
OTHER INFORMATION:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Virginia
: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 22046-0747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 19
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYPOTHETICAL: NAMINI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: Vi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE
                                                                                                                                                                                                                                                                                                                                   RESULT 40
                                                                                                                                                                                                                                      ò
                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 39
US-09-093-972C-755
US-09-09-972C-755, Application US/09093972C
; Patent No. 6825174
; GENERAL INFORMATION:
; GENERAL INFORMATION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
; TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
; TITLE OF INVENTION:
; REATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH BROWCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                     Score 9.4; DB 1; Length 11; Pred. No. 27;
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Unn-1998
CLASSIFICATION AUMBER: US/09/093,972C
APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 12-Unne-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-Unne-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
                  ATTORNEY/AGENT INFORMATION:
NAME: Amcal, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUICATION: INFORMATION:
TELEPHONE: 609-409-3035
TELEPHONE: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER: EPI-00672
                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                  TOPOLOGY: linear
MOLECULE TYPE: DIA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 718:
US-09-093-972C-718
FILING DATE: 30-January-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
                                                                                                                                                 TELEX: <UNKNOWN>
INFORMATION FOR SEQ ID NO: 718:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                  LENGTH: 11 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 755: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 90.9%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 08512
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GAGGGCGCCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

```
Sequence 68, Application US/08057971; Patent No. 5679770; GENERAL INFORMATION:
                        58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
                                             Local Similarity 90.5
les 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                         6 GGCGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ) OTHER INFORMATION: /
; OTHER INFORMATION: /
; OTHER INFORMATION: /
; OTHER INFORMATION: an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: 1..12
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
FEATURE:
                                                                                                                                            12 GGCGGCGTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: DN
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANTI-SENSE: NO
FEATURE:
NAME/KEY: -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: CDS
LOCATION: 1..1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                             US-08-057-971-68/c
                          Query Match
Best Local S:
Matches 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                            a
a
                                                                                                         ò
                                                                                                                                                                                                                                                                         Sequence 68, Application US/08431412
Patent No. 5589360
GENERAL INFORMATION:
APPLICANT: Morishita, Hideaki
APPLICANT: Kanamori, Toshinori
APPLICANT: No. 5589360uhara, Masahiro
TITLE OF INVENTION: Polypeptide, DNA Fragment Encoding the
TITLE OF INVENTION: Producing the Same and Process for
TITLE OF INVENTION: Producing the Same
NUMBER OF SEQUENCES: 76
                                                                                                       ö
                                                                                                       Gaps
  amino terminus of peptide protease inhibitors"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product= "amino terminal addition" /note= "preferable amino acids to be added to amino terminus of peptide protease inhibitors"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= 5'_extension
/note= "preferable additional amino terminal
codons for peptide protease inhibitors"
                                                                                                       ö
                                                              Length 12
                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE SILVENCES: /o
CORRESPONDENCE BITCh, Stewart, Kolasch & Birch
STREET: 301 N. Washington St.
CITY: Falls Church
STATE: Virginia
COUNTRY: USA
ZIP: 22046-0747
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: BRADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: PIEM PC-COMPATIBLE
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: PACENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/431,412
FILING DATE: 28-APR-1995
CLASSIFICATION ADATA:
APPLICATION NUMBER: US 07/972,387
FILING DATE: 05-NOV-1992
ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 28,977
RESTRENCE/DOCKET NUMBER: 28,977
RESTRENCE/DOCKET NUMBER: 1110-124P
TELEFPHONE: 703-241-1300
TELEFPAX: 703-241-2848
                                                       Query Match 58.7%; Score 9.4; DB 1; Best Local Similarity 90.9%; Pred. No. 30; Matches 10; Conservative 0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 703-241-2848
TELEX: 248345
INFORMATION FOR SEQ ID NO: 6
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
                                                                                                                                      6 GCCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                             12 GGCGCCTCGT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: CDS
LOCATION: 1..12
COTHER INFORMATION:
COTHER INFORMATION:
COTHER INFORMATION:
COTHER 11-12-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: -
LOCATION: 1..12
OTHER INFORMATION:
OTHER INFORMATION:
OTHER INFORMATION:
FEATURE:
; OTHER INFORMATION:
US-07-972-387-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                            US-08-431-412-68/c
                                                                                                                                        ઠ
                                                                                                                                                                            g
```

```
Desey Watch

Bacted Local Similarity 90.91; Proch 91.7; Design 12;

Bacted Local Similarity 90.91; Proch 91.7; Design 12;

Bacted Local Similarity 90.91; Proch 91.7; Design 12; Design 0, 0.0

Tocal Conferential Design 12; Design 12
```

```
Score 9.4; DB 1; Length 12;
Pred. No. 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-757-024-736

Sequence 736, Application US/08757024

Sequence 736, Application US/08757024

Sequence 736, Application US/08757024

GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA ITITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA DUMBES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON STRATE: P.O. Drawer 34009

CTTY: CHALOLUC ACTORNO STATE: No. 6025339th Carolina
CCUNTRY: USA
            SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTONREY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/DOCKET NUMBER: 5218-41
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFRAK: 919-881-3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPOTER: IBM PC compatible
COMPOTER: IBM PC compatible
COMPATE: The PC compatible
COMPATE: The PC compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: SIDIAY KENNEATION:
NAME: SIDIAY KENNEATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 119-081-3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY: linear; MOLECULE TYPE: DNA (genomic)
US-08-757-024-717
                                                                                                                                                                                                                                                                                                                                                                                                                                                     58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: 7 SEQUENCE CHARACTERISTICS: LENGTH: 12 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 12 base pairs TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-757-024-736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 30;
                                                                                                       US-08-757-024-676

US-08-757-024-676

Sequence 676, Application US/08757024

Patent No. 6022339

GRNEALI INFORMATION:

APPLICANT: Nyce, Jonathan W.

TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952

CORRESPONDENCE ADDRESS:

ADDRESSEE: BELL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 34009

CITET: Corarlotte STATE: No. 6025339th Carolina

COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 717, Application US/08757024
; Patent No. 6025339
; GENERAL INFORMATION:
APPLICANT: NYCE, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE BELL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 34009
; STREET: P.O. Drawer 34009
; STATE: No. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , MOLECULE TYPE: DNA (genomic) US-08-757-024-676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGCGGGCGGCA 12
  6 GGCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGAGGGCGCA 12
                              12 GGCGGCGTCGT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-757-024-717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
ò
                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

Gaps

ö

1; Indels

```
ZIP: 08512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-093-972C-676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 676, Application US/09093972C
Patent No. 6825174
GENERAL INPORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                  ó,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
  58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 30; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                          Sequence 754, Application US/08757024
| Patent No. 6025339
| GENERAL INFORMATION |
| APPLICANT |
| TITLE OF INVENTION | METHOD OF TREATMENT FOR ASTHMA |
| WUMBER OF SEQUENCES | 952 |
| CORRESPONDENCE ADDRESS: ADDRESSEE: BELL, SELTZER, PARK & GIBSON |
| STREET: P.O. Drawer 34009 |
| CITY: Charlotte |
| STATE: No. 6025339th Carolina |
| COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTONREY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFRENCE/DOCKET NUMBER: 5218-41
TELEPROMUNICATION INFORMATION:
TELEPRAK: 919-881-3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
CITY: Cranbury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 12 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                    GGGCGCCATCG 15
                                                                                                                               2 GGGCGGCATGG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ĠĠĠĠĠĠĊĂŢĠĠ 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 47
US-09-093-972C-676
Query Match
Best Local Simi]
Matches 10; (
                                                                                                                                                                                                         US-08-757-024-754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-757-024-754
                                                                                       ઠે
                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
```

```
RESULT 48
US-09-093-972C-717
US-09-093-972C-717, Application US/09093972C
Sequence 717, Application US/09093972C
Betent No. 6625174
GENERAL INFORMATION:
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION TITLE OF INVENTION: COMPOSITION, POISBASES & CONDITIONS ASSOCIATED WITH BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                      SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC Compartible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Vergion #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Uun-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 9.4; DB 1;
Pred. No. 30;
0; Mismatches 1;
                                                                                                                   CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/093, 972C
FILING DATE: 09-Jun-1998
CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/72,024
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 3-Junary-1998
ATTORNEY/AGENT INFORMATION:
NAME: Amzel, Viviana
REGISTATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: BPI-00672
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 676:
                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 12 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: «Unknown»
INFORMATION FOR SEQ ID NO: 676
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GGCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GGAGGGCGCA 12
```

Gaps

```
RESULT 50
US-09-033-972C-754
i Sequence 754, Application US/09093972C
j Patent No. 6825174
j GENERAL INFORMATION:
j GENERAL INFORMATION:
j TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
j TITLE OF INVENTION: ARSOCIATED WITH BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER KEADABLE FORM

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

COMPUTER: IBM PC COMPATIBLE

COMPUTER: PATENTIN Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/093,972C

FILING DATE: 09-Jun-1998

CLASSIFICATION COMPAN:

APPLICATION NUMBER: US 08/472,527

FILING DATE: 7-June-1995

APPLICATION NUMBER: US 08/472,527

FILING DATE: 7-June-1995

APPLICATION NUMBER: US 09/016,464

FILING DATE: 7-June-1998

ATTORNEY/AGENT INFORMATION:

NAME: AMZEL, Viviana

REGISTRATION NUMBER: 30,930

REFERENCEY/DOCKET NUMBER: EPI-00672

TELEFRAX: 413-254-9245

TELEFRAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                     Score 9.4; DB 1; Length 12;
Pred. No. 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
TELERAX: 413-254-9245
TELEX: <UNKNOWN>
INFORMATION FOR SEQ ID NO: 736:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                      TYPE: nucleic acid

TYPE: nucleic acid

TYPE: nucleic acid

TOPOLOGY: linear

MOLECULE TYPE: DIA (genomic)

SEQUENCE DESCRIPTION: SEQ ID NO: 736:
US-09-093-972C-736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 754:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
                                                                                                                                                                                                                                                                                                                                                                                        58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 08512
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEX: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 GGGGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 geeceechiee 12
                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 736, Application US/09093972C
Sequence 736, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 9.4; DB 1; Length 12; Pred. No. 30; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FO Compartible
OPENATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: «Unknown»
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC. STREET: 7 Clarke Drive CITY: Cranbury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
                                                             FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) SEQUENCE DESCRIPTION: SEQ ID NO: 717:
                                                                                                                                                                                                                                                     NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 413-254-9245
TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 717:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 12 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GAGGGCGGCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 49
US-09-093-972C-736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-093-972C-717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
```

```
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                   58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 13;
                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                            US-08-757-024-653
; Sequence 653, Application US/08757024
; Patent No. 6025339
; GENERAL INFORMATION:
; APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA; NUMBER OF SEQUENCES: 952
; CORRESPONDERS BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; STREET: P.O. Drawer 34009
; STATE: No. 6025339th Carolina
; COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CORPTARE: BATENTI RELEASE #1.0, Version #1.30
SOFTWARE: PATENTI NATA
SOFTWARE: PATENTI NATA
SOFTWARE: PAPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 735, Application US/08757024
Patent No. 6025339
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.7%; Score 9.4; D 90.9%; Pred. No. 33;
                  TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 754:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: SIDLEY, Kenneth D.
REGISTRATION NUMBER: 31,665
REGISTRATION NUMBER: 5218-41
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
TELEFAX: 919-881-3175
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 912
TELEFAX: 912
TELER: 575102
INFORMATION FOR SEQ ID NO: 657
SEQUENCE CHARACTERISTICS:
LENGTH: 13 base pairs
"VPE: nucleic acid
"VPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: DNA (genomic)
                                                                                                               Query Match
Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                               5 GGCGGCATCG 15
                                                                                                                                                                                                                              1 GGCCGCATGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGGGGGGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GGAGGGCGCCA 13
                                                                            US-09-093-972C-754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-757-024-735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-757-024-653
                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
```

```
Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 9.4; DB 1; Length 13;
Pred. No. 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 53
US-08-757-024-753
US-08-757-024-753
Sequence 753, Application US/08757024
Fatent No. 6025339
Fatent No. 6025339
FILEGANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON STREET: PO. Drawer 34009
CITY: Charlotte
STATE: No. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SULTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/757,024 FILING DATE: 26-NOV-1996 CLASSIFICATION: 514
                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
PAPLICATION NUMBER: US/08/757,024 FILING DATE: 26-NOV-1996 CLASSIFICATION: 514
             SBEB: BELL, SELTZER, PARK & GIBSON 1: P.O. Drawer 34009 Charlotte No. 6025339th Carolina No. 1025339th Carolina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                    COMPUTER REALABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 5218
TELECOMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
TELEPAX: 919-881-3175
TELEPX: 5/75102
INFORMATION FOR SEQ ID NO: 735:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/DOCKET NUMBER: 5218
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best_Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 13 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 GGGGGCATCG 15
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
                                                                                                    COUNTRY: U
ZIP: 28234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-757-024-735
```

919-881-3175

ઠ 셤

```
STENT NO. 00.27.7.
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 13;
                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
SERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESSE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: EPI-00672 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
         90.9%; Pred. No. 33;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 7-June-1995
PAPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-996
APPLICATION NUMBER: US 08/472,527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 09-Jun-1998
CLASSIFICATION: <Unknown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 9.4; D
Pred. No. 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)

SEQUENCE DESCRIPTION: SEQ ID NO: 735:
US-09-093-972C-735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 30-January-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-093-972C-753; Sequence 753, Application US/09093972C
                                                                                                                                                                                                                         Sequence 735, Application US/09093972C Patent No. 6825174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 73
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
ZIP: 08512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ELEX: <Unknown>
         Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                        2 GGCGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCCGCCATCG 15
                                                                                                                 3 GGAGGGCGGCA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                RESULT 55
US-09-093-972C-735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             q
                                                                          ð
                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Nyce, Jonathan W.

APPLICANT: Nyce, Jonathan W.

TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION

& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 08512

COMPUTER READABLE FORM:
    MEDIUM TYPE: Floppy disk
    COMPUTER: IBM PC compatible
    OPERATING SYSTEM: PC-DOS/MS-DOS
    SOFTWARE: Patentin Release #1.0, Version #1.30
    CURRIN APPLICATION DATE:
    PAPPLICATION NOWBER: US/09/093,972C
    FILING DATE: 09-Jun-1998
    CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                         58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 13;
                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: EPI-00672
                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.7%; Score 9.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 30-January-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 653, Application US/09093972C Patent No. 6825174 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 13 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                   TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
TELEX: 575102
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 13 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                             Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                               5 GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                        1 ĠĠĠĊĠĠĊĂŢĠĠ 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-093-972C-653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-093-972C-653
                                                                                                                                                                                US-08-757-024-753
                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
```

```
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 5218
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
TELEFAX: 919-881-3175
TELEFX: 5/75102
INFORMATION FOR SEQ ID NO: 756: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-757-024-738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100.vv
                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 10 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 GGGGGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 58
US-08-757-024-756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                              APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
E TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                    58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 738, Application US/08757024
Patent No. 6025339
GENERAL INFORMATION: APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSE: BELL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 34009
CITY: Charlotte
COUNTRY: USA
COUNTRY: USA
                                                                                                             NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REGISTRATION NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 753:
US-09-093-972C-753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: 753:
SEQUENCE CHARACTERISTICS:
LENGTH: 13 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                               CITY: Cranbury
STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 GGGGGCATCG 15
                                                                                                                                                                                                                                     COUNTRY: USA
Patent No. 6825174
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-757-024-738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
```

```
Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 756, Application US/08757024
Patent No. 6025339
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELIZER, PARK & GIBSON
STREET: P.O. Drawer 34009
CITY: Charlotte
STATE: USA
COUNTRY: USA
OPERATING SYSTEM: PC-LUCS, PNS-LUCS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: SIDLEY, Kenneth D.
REGISTRATION NUMBER: 5218-41
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
TELEPHONE: 919-881-3140
TELEPHONE: 919-881-3175
TELEFAX: 919-881-3175
TELEX: SF0102
INFORMATION FOR SEQ ID NO: 738:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: Z6-NOV-1996
CLASSIPICATION: 51-NOV-1996
ATTORNEY FAGENT INPORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31.665
REGISTRATION NUMBER: 31.665
REGISTRATION NUMBER: 31.665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56.2%; Score 9; DB 1
100.0%; Pred. No. 30;
vative 0; Mismatches
```

iss20.res

```
US-09-093-972C-756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 61
US-08-757-024-737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                   Sequence 738, Application US/09093972C
Patent NO. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
TITLE OF INVENTION: ETREATHED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                   Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION NUMBER: US 08/472,527
RILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 30-January-1998
ATTORNEY/AGENT INPERATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56.2%; Score 9; DB 1;
100.0%; Pred. No. 30;
tive 0; Mismatches
                                                                                                   DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
                                                                                             Query Match 56.2%; Score 9; DB 1
Best Local Similarity 100.0%; Pred. No. 30;
Matches 9; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 738:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 10 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 738:
, TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-757-024-756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 99
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Cranbury
STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FELEX: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5 GGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCCGCCAT 10
                                                                                                                                                                                5 GGCCGCCAT 13
                                                                                                                                                                                                                     1 GGGCGCCAT 9
                                                                                                                                                                                                                                                                                                  US-09-093-972C-738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-093-972C-738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                               RESULT 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                   쉽
                                                                                                                                                                                  ò
```

```
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC Compatible
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTER: PC-LOSS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <unknown>
                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 737, Application US/08757024
Patent No. 6025339
EBENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 56.2%; Score 9; DB 1
Best Local Similarity 100.0%; Pred. No. 30;
Matches 9; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 756:
US-09-093-972C-756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 30-January-1998 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI
TELECOMMUNICATION INFORMATION:
; Sequence 756, Application US/09093972C; Patent No. 6825174; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                             ZIP: 08512
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 413-254-9245
TELEX: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 756:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                     CITY: Cranbury
STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 GGCGGCAT 13
```

```
US-09-093-972C-737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-116-388-7/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     쉽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/09220510B

Sequence 4, Application US/09220510B

Patent No. 6440726

GENERAL INFORMATION:

APPLICANT: RESNICK, INITZAN

TITLE OF INVENTION: RESPONSIVE ELEMENTS (SSRE) AND METHODS OF USE FOR

TITLE OF INVENTION: TREATING DISORDERS RELATED TO VASCULGENESIS AND/OR

TITLE OF INVENTION: ANGIOGENESIS IN A SHEAR STRESS ENVIRONMENT

TITLE OF INVENTION: ANGIOGENESIS IN A SHEAR STRESS ENVIRONMENT

CURRENT APPLICATION NUMBER: US/09/220,510B

CURRENT FILING DATE: 1998-12-24

NUMBER OF SEQ ID NOS: 6

SEQ ID NO 4

LENGTH: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
OTHER INFORMATION: Description of Artificial sequence: An SP1 sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 11;
                                                                                                                                                                             CARPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/COCKET NUMBER: 31,665
REFERENCE/COCKET NUMBER: 31,665
REFERENCE/COCKET NUMBER: 31,665
REFERENCE/COCKET NUMBER: 31,665
REFERENCE/COKET NUMBER: 37,665
REFERENCE/COKET NUMBER: 31,665
REFERENCE/COMPUTER SEGUENT NUMBER: 31,665
REFERENCE/COMPUTER 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56.2%; Score 9; DB 1;
100.0%; Pred. No. 33;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56.2%; Score 9; DB 1;
100.0%; Pred. No. 33;
:ive 0; Mismatches
3: BELL, SELTZER, PARK & GIBSON
P.O. Drawer 34009
                 STREET: P.O. CITY: Charlotte
STATE: No. 6025339th Carolina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; MOLECULE TYPE: DNA (genomic) US-08-757-024-737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 56.2
Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCCGCAT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 GGGGGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear
ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-220-510B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-220-510B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
```

```
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Birkenmeyer, Larry G.
APPLICANT: Ching, ShanFun
APPLICANT: Ohhashi, Yashiro
APPLICANT: Winkler, Janet K.
TITLE OF INVENTION: Oligonucleotides and Methods for Dectecting
TITLE OF INVENTION: Neisseria Gonorrhoeae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATE: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: CURROWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REGISTRATION NUMBER: 30,930
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56.2%; Score 9; DB 1
100.0%; Pred. No. 33;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: DNA (Genomic) SEQUENCE DESCRIPTION: SEQ ID NO: 737: US-09-093-972C-737
; Sequence 737, Application US/09093972C
; Patent No. 6825174
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 7, Application US/08116388; Patent No. 5453355; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 11 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX: «Unknown»
INFORMATION FOR SEQ ID NO: 73'
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                   STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                             CITY: Cranbury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GGGCGCCAT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
```

```
Gaps
                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 7, Application PC/TUS9409318

GENERAL INFORMATION:
APPLICANT: ABBOTT LABORATORIES
APPLICANT: Ching, ShanFun
APPLICANT: Ching, ShanFun
APPLICANT: Winkler, Janet K.
TITLE OF INVENTION: Oligonucleotides and Methods for Detecting
TITLE OF INVENTION: Neisseria Gonorrhoeae
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                              ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .;
0
                                                                                                                                                                                                                                                                                               55.0%; Score 8.8; DB 1; Length 12; 83.3%; Pred. No. 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 12;
                                                                                                                                                                                                                                                                                                                                            2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 55.0%; Score 8.8; DB Best Local Similarity 83.3%; Pred. No. 40; Matches 10; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: 1111nois
STATE: 1111nois
COUNTRY: USA
ZIP: 60064-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PCDOS/MSDOS
SOFFEEN WOARDestfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/09318
                 REGISTRATION NUMBER: 37,642
REFERENCE/DOCKET NUMBER: UTSD:450
TELECOMUNICATION INFORMATION:
TELEPAX: (512) 418-3000
TELEFAX: (512) 474-757
INFORMATION FOR SEQ ID NO: 27:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
TYPE: nucleic acid
STRANDENNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5373.PC.01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: ABBOTT LABORATORIES
STREET: One Abbott Park Road
CITY: Abbott Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Brainard, Thomas D.
REGISTRATION NUMBER: 32,459
REFERENCE/DOCKET NUMBER: 5373
TELECOMUNICATION INFORMATION:
TELECPHONE: 708 937-4884
TELEPHONE: 708 938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX:
INFORMATION FOR SEQ ID NO: 7
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 83.3
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                   3 GCGGGCGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 GGCCGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                           12 GCTGGAGGCATC 1
                                                                                                                                                                                                                               ; TOPOLOGY: linear
US-08-726-214-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; MOLECULE TYPE: DNA
PCT-US94-09318-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 66
PCT-US94-09318-7/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 27. Application US/08726214

Patent No. 6107076

GENERAL INFORMATION:
APPLICANT: Tang, Wei-Jen
TITLE OF INVENTION: SOLUBLE MAMMALIAN ADENYLYL CYCLASE
TITLE OF INVENTION: AND USES THEREFOR
NUMBER OF SEQUENCES: 3

CORRESPONDENCE ADDRESS:
ADDRESSEE: Arnold, White & Durkee
STREET: P.O. Box 4433
CITY: Houston
STATE: Texas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 8.8; DB 1; Length 12;
Pred. No. 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/726,214
FILING DATE: Concurrently Herewith CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/005,498
FILING DATE: 04-OCT-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
      CORRESPONDENCES ADDRESS:
ADDRESSEE: ABBOTT LABORATORIES
STREET: One Abbott Park Road
CITY: Abbott Park
STATE: Illinois
COUNTRY: USA
ZIP: GOO64-3500
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PCDOS/MSDOS
SOFTWARE: WordPerfect
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/116,388
FILING DATE: 03 SEPTEMBER 1993
CLASSIFTCATION: 435
ATTONNEY, AGENT INFORMATION:
NAWE: Brainard, Thomas D.
REGISTRATION NUMBER: 32,459
REFERENCE/DOCKET NUMBER: 5373.US.O1
TELECHONE: 708 938-2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: Texas
COUNTRY: United States of America
ZIP: 77210
COMPUTER READABLE FORM:
MEDIUM TYRE: Rloppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 83.3%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
NUMBER OF SEQUENCES: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5 GGGGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12 dedecedercer 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 65
US-08-726-214-27/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-116-388-7
```

셤 ò

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 719, Application US/08757024
; Patent No. 6025339
; GENERAL INFORMATION:
    TITLE OF INVERTION:
    TITLE OF INVERTION:
    ADDRESSEE: BELL, SELIZER, PARK & GIBSON
    STREET: P.O. Drawer 34009
    CITY: Charlotte
    STATE: USA
                                    COMPUTER: READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: Ploppy disk
COMPUTER: Ploppy disk
COMPUTER: PatentIn Belease #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: 26.NOV-1996
CLASSIFICATION NUMBER: 214
ATTORNEY/AGENT INFORMATION:
NAME: SIDLey, Kenneth D.
REGISTRATION NUMBER: 31,665
REGISTRATION NUMBER: 5218-41
TELEFHONE: 919-881-3140
TELEFAK: 919-881-3175
INFORMATION FOR SEQ ID NO: 699:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
TYPE: nucleic acid
TTELEYDENDENDERS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATE: 26-NOV-1996

FILING DATE: 26-NOV-1996

CLASSIFICATION: 514

ATTORNEY/AGENT INFORMATION:

NAME: SIDLEY, Kenneth D.

REGISTRATION NUMBER: 518-41

TELEBHOKE/DOCKET NUMBER: 5218-41

TELEBHOKE/DOCKET NUMBER: 5218-41

TELEBHOKE: 919-881-3140

TELEFAX: 919-881-3175

TELEFAX: 919-881-3175

INFORMATION FOR SED ID NO: 719:

SEQUENCE CHARACTERISTICS:

LENGTH: 10 base pairs

LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52.5%; Score 8.4; DB 90.0%; Pred. No. 40; tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-757-024-699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match
Best Local Similarity 90.0-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGAGGGCGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-757-024-719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                       Sequence 7, Application US/08677734A
Patent No. 581919
GENERAL INFORMATION:
APPLICANT: Brant, Steven R.
APPLICANT: Yun, Chris C.H.
APPLICANT: Tonowitz, Mark
APPLICANT: Ma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 40; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TILLE OF INVENTION: NHE3.

NUMBER OF SEQUENCES: 12

CORRESPONDENCE ADDRESS:
ADDRESSER: Finnegan, Henderson, Farabow, Garrett & ADDRESSER: Finnegan, Henderson, Farabow, Garrett & ADDRESSER: Dunner
STREET: 1300 I Street, N.W., Suite 700
CITY: Washington
STATE: D.C.
COUNTRY: USA
ZIP: 20005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PRECENTION DATA:
APPLICATION NUMBER: US/08/677,734A
FILING DATE: 10-UUL-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: FOLGIS, Jean B.
REGISTRATION NUMBER: 32,984
REFERENCE/DOCKET NUMBER: 05387.0043-00000
TELECOMMONICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 699, Application US/08757024
; Patent No. 6025339
; GERERAL INFORMATION:
APPLICANT: NYCe, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
; CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON
STREET: P.O. Drawer 34009
; STREET: P.O. Drawer 34009
; STRYE: No. 6025339th Carolina
; COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 7: SEQUENCE CHARACTERISTICS: LENGTH: 10 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 90.0
12 GGCGGGGTCGT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GCGGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GCAGGGGCA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-757-024-699
                                                                                                                                                                              US-08-677-734A-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-677-734A-7
                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
```

Wed May 10 10:49:50 2006

```
US-09-093-972C-699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-097-053-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
0
                                                                                         ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Length 10;
                                                            DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                                                                         Indels
                                                                                                                                                                                                     COUNTRY: CITE 28234

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 24-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/DOCKET NUMBER: 5218-41
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Brant, Steven R.
APPLICANT: Yun, Chris C.H.
APPLICANT: Donowitz, Mark
APPLICANT: Tse, Chung-Ming
TITLE OF INVENTION: Cloning, Tissue Distribution, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 8.4; D
Pred. No. 40;
                                                           Score 8.4; D
Pred. No. 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-097-053-7; Sequence 7, Application US/09097053; Patent No. 6392025
; TOPOLOGY: linear; MOLECULE TYPE: DNA (genomic) US-08-757-024-719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)
US-08-757-024-773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52.5%;
                                                         52.5%;
ilarity 90.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GCCGCATGG 10
                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 GGCGCCATCG 15
                                                                                                                                                1 GAGGGGGGCA 10
                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                   3 GCGGGCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Brant,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
TITLE OF INVENTION: Functional Analysis Of The Human Na+/H+ Exchanger Isoform, TITLE OF INVENTION: NHE3.
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 699, Application US/09093972C

Patent No. 6825174

GENERAL INFORMATION:

APPLICANT: Nyce, Jonathan W.

TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION

& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH

BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
PIPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
                                                                                        ADDRESSEE: Finnegan, Henderson, Farabow, Garrett
ADDRESSEE: Dunner
STREET: 1300 I Street, N.W., Suite 700
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESS:
ADDRESSE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                        COUNTRY: USA
ZIP: 20005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-FOOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/097,053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 8.4;
Pred. No. 4
                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION:
APPLICATION NUMBER: US 08/677,734
FILING DATE: 10-JUL-1996
ATTORNEY/AGENT INFORMATION:
NAME: Fordis, Jean B.
REGISTRATION NUMBER: 32,984
REFERENCE/DOCKET NUMBER: 05387.0043-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 08512
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (202) 408-4400
INFORMATION FOR SEQ ID NO: 7
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GCAGGCGGCA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
nes 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                     STATE: D.C. COUNTRY: US
```

Gaps

```
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: ILOPPy disk
COMPUTER: ILOPPy disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: cUnknown>
PRIOR APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/77,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 7-June-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                            Score 8.4; DB 1; Length 10; Pred. No. 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                               REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMVINICATION INDEPMATION:
TELEPHONE: 609-409-3035
TELEFAX: 413-254-9245
TELEFAX: 413-254-9245
INFORMATION FOR SEQ ID NO: 719:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Amzel, Viviana
REGISGTRATION NUMBER: 30,930
REFERENCE FOCKET NUMBER: EPI-00672
TELECOMMUNICATION:
TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) SEQUENCE DESCRIPTION: SEQ ID NO: 719:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-093-972C-773
; Sequence 773, Application US/09093972C
; Patent No. 6825174
; GENERAL INFORMATION:
                                                                                                                                                                                                                 LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: gingle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: 773:
                                                                                                                                                                                                                                                                                                                                                                                                            52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 08512
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE: New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                             9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Cranbury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 GCGGGGGGA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GAGGCCGCCA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                               US-09-093-972C-719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Nyce, Jonathan W.

IITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION

& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: COMPANDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 40; Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                           FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
                                                                                                                                                                                                                                                      NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-Unne-1995
PHILING DATE: 26-11-1996
PILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) SEQUENCE DESCRIPTION: SEQ ID NO: 699:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 719, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: 609-409-3035
TELEFAX: 413-254-9245
                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 10 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO: 699:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                    TELEX: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-093-972C-719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-093-972C-699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 44;
                                                                                                                                                                                                    52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 40; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 677, Application US/08757024
| Patent No. 6025339
| GENERAL INFORMATION OF GENERAL INFORMATION OF TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA INTERPRET OF SEQUENCES: STREET: P.O. Drawer 34009
| STREET: P.O. Drawer 34009
| CITY: Charlotte | STATE: USA | CArolina | COUNTRY: USA | USA | CANDINA | CANDINA | USA | COUNTRY: USA | CANDINA | CANDINA | CANDINA | COUNTRY: USA | CANDINA | CANDINA | CANDINA | COUNTRY: USA | CANDINA | CAND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 772, Application US/08757024
Patent No. 6025339
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) SEQUENCE DESCRIPTION: SEQ ID NO: 773: US-09-093-972C-773
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                    Query Match
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 11 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 90.v-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                               6 GGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGCGGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-757-024-772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 75
US-08-757-024-677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-757-024-677
                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                               셤
```

```
US-09-165-239A-9/C

| Sequence 9, Application US/09165239A
| Patent No. 6344554
| Patent No. 6344554
| Patent No. 6344554
| GENERAL INFORMATION:
| APPLICANT: JOHNSON, ALEXANDER
| APPLICANT: JOHNSON, ALEXANDER
| TITLE OF INVENTION: BRAUN, BUKKHARD R
| TITLE OF INVENTION: ALBICANS ENCODING POLYPEPTIDES ASSOCIATED WITH FILAMENTOUS
| TITLE OF INVENTION: ALBICANS ENCODING POLYPEPTIDES ASSOCIATED WITH FILAMENTOUS
| TITLE OF INVENTION: ALBICANS ENCODING POLYPEPTIDES ASSOCIATED WITH FILAMENTOUS
| TITLE OF INVENTION: ALBICANS ENCODING POLYPEPTIDES ASSOCIATED WITH FILAMENTOUS
| TITLE OF INVENTION: ALBICANS ENCODING POLYPEPTIDES ASSOCIATED WITH FILAMENTOUS
| FILE OF INVENTION: ALBICANS ENCODING POLYPEPTIDES ASSOCIATED WITH FILAMENTOUS
| FILE OF INVENTION: US/09/165, 239A
| CURRENT FILING DATE: 1998-10-01
| PRIOR FILING DATE: 1997-12-18
| NUMBER OF SEQ ID NOS: 13
| SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 8.4; DB 1; Length 11;
Pred. No. 44;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                       COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: SIDLEY, Kenneth D.
REGISTRATION NUMBER: 5218-41
TELERHOCHONICATION INFORMATION:
TELERHOCHONICATION INFORMATION:
TELERHORS: 919-881-3175
TELERAX: 919-881-3175
                   ADDRESSEE: BELL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 34009
COUNTRY: Charlotte
STATE: No. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 8.4; Di
Pred. No. 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-757-024-772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Candida albicans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ouery Match
Best Local Similarity 90.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCGGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CGCCGGCCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11 CGGAGGGCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-165-239A-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 9
```

11 CGGAGGGCGG 2

g

```
US-09-563-997A-41/C

Sequence 41, Application US/09563997A

Parent No. 6677437

GRNERAL INFORMATION:

APPLICANT: Nezu, Jun-Ichi
APPLICANT: Oku, Asuka

ITILE OP INVENTION: NOVEL SERINE-THREONINE KINASE GENE

FILE REFERENCE: 06501-033002

CURRENT APPLICATION NOWER: US/09/563,997A

CURRENT APPLICATION NUMBER: US 09/344,700

PRIOR FILING DATE: 1999-06-25

PRIOR FILING DATE: 1997-12-25

PRIOR FILING DATE: 1997-12-25

PRIOR APPLICATION NUMBER: UP 8-357864

FRIOR PILING DATE: 1996-12-27
         RESULT 80
US-09-643-657-23/C
US-09-643-657-23/C
Sequence 23, Application US/09643657
Fatent No. 6642024
GENERAL INFORMATION:
APPLICANT: Diane Pennica
TITLE OF INVENTION: GUANYLATE-BINDING PROTEIN
NUMBER OF SEQUENCES: 43
CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech, Inc.
STREET: 1 DNA Way
CITY: South San Francisco
STATE: California
COUNTRY: USA
ZIP: 94080
ZIP: 94080
ZIP: 94080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk COMPUTER: 18M PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: MAINPATHN (Genentech)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/643,657
FILING DATE: 17-Aug-2000
CLASSIFICATION: <UNKNOWN>
PRIOR APPLICATION NUMBER: 09/015,089A
FILING DATE: 29-03n-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 8.4; DB 1;
Pred. No. 44;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE DESCRIPTION: SEQ ID NO: 23:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Hasak, Janet E.
REGISTRATION NUMBER: 28,616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: TELECOMMUNICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 650/952-9881
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
LENGTH: 11 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 90.0%;
Matches 9; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 066066666 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 CGGAGGGCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-643-657-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                        APPLICANT: Botestein, David A.
APPLICANT: Cohen, Robert
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Goddard, Audrey
APPLICANT: Graneth J.
APPLICANT: Hillan, Kenneth J.
APPLICANT: Lavence, David A.
APPLICANT: Lavence, David A.
APPLICANT: Pennica, Diane
APPLICANT: Roy, Margaret Ann
APPLICANT ANN
APPLICANT ANN
APPLICANT ANN
APPLICANT ANN
APPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 79, Application US/0894410
Patent No. 6607878
GENERAL INFORMATION:
APPLICANT: Sorge, Joseph A.
TITLE OF INVENTION: COLLECTIONS OF UNIQUELY TAGGED MOLECULES
FILE REPREMENCE: 04121.0018-00000
CURRENT APPLICATION NUMBER: US/08/944,410
CURRENT FILING DATE: 1997-10-06
NUMBER OF SEQ ID NOS: 113
SOFTWARE: PatentIn version 3.1
SEQ ID NO 79
LENGTH: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 44; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 8.4; DB 1;
Pred. No. 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Sequence is synthesized Patent No. 6387657
                             Sequence 44, Application US/09182145B
Patent No. 6387657
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Synthetic primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CGGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CGGCGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 CGGAGGCCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial
US-09-182-145-44/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 79
US-08-944-410-79/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-182-145-44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-944-410-79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
```

ò g ö

Gaps

ö

Length 11; Indels

d ઠે

```
HEALT NO. BEASLA.
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
E. TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: «Unknown»
PRIOR APPLICATION: «Unknown»
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 8.4; DB 1; Length 11;
Pred. No. 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 08/472,527 PILING DATE: 7-Unne-1995
APPLICATION NUMBER: US 08/757,024 PILING DATE: 26-11-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 677:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 772, Application US/09093972C Patent No. 6825174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 08512
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: 677:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-093-972C-677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-093-972C-772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Description of Artificial Sequence: Artificial Synthesized Adapte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 677, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
TITLE OF INVENTION: COMPOSITION OF DISEASES & COMDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                  52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52.5%; Score 8.4; DB 1; Length 11, 90.0%; Pred. No. 44;
                                                                                                                                                          ; FEATURE:
; OTHER INFORMATION: synthetically generated oligonucleotide
US-09-563-997A-41
                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
CITY: Cranbury
                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 82
US-09-521-195B-32/C
Sequence 32, Application US/09521195B
Patent No. 6755514
GENERAL INFORMATION:
APPLICANT: NCAL, Jun-Ichi
APPLICANT: NCAL, Jun-Ichi
APPLICANT: OKU, ABUKA
TITLE OF INVENTION: TRANSPORTER GENES
FILE REFERENCE: 06501-05701
CURRENT APLICATION NUMBER: US/09/521,195B
CURRENT PELING DATE: 1908-05-20
PRIOR PILING DATE: 1998-05-20
PRIOR APPLICATION NUMBER: UP 9/260972
PRIOR APLICATION NUMBER: PCT/JP98/04009
PRIOR FILING DATE: 1998-09-07
NUMBER OF SEQ ID NOS: 33
SENGIT IN NOS: 33
                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                 SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                 TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                      1 066066606 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CGGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11 CGGAGGCGG 2
                                                                                                                                                                                                                                                                                                                                                                               11 cegaedeces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 83
US-09-093-972C-677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-521-195B-32
                                                 SEQ ID NO 41
                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
```

ò 셤

```
ADDRESSEE: Patrea L. Pabst
STREET: 2800 One Atlantic Center
STREET: 1201 West Peachtree Street
                                                                                                                                                                                                                                ; Sequence 5, Application US/08123702
; Patent No. 5604131
  52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (404)-873-8794
TELEPAX: (404)-873-8795
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
Query Match
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                  3 CGCCAGCCGC 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 CGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10 CGGCCAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Atlanta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
COCATION:
US-08-123-702-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 87
US-08-757-024-654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                      ઠે
                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                         52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 44; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-025-038-23
Sequence 23, Application US/08025038
Patent No. 554526
Barear INFORMATION:
APPLICANT: BAXTER-LOWE, Lee-Ann
TITLE OF INVENTION: Method For HLA Typing
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 777 E. Wisconsin Avenue
CITY: Milwaukee
STATE: Wisconsin
COUNTRY: Wilwaukee
STATE: Wisconsin
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/025,038
FILING DATE: 19930301
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: O7/544,218
FILING DATE: 27-JUN-1990
ATTORNEY/AGENT INFORMATION:
NAME: Meyers, Philip G.
REGIEFORD ATTORNEY/AGENT INFORMATION:
NAME: Meyers, Philip G.
               FILING DATE: 7-Unne-1995
FILING DATE: 7-Unne-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY AGENT INFORMATION:
NAME: Amzel, Viviana
REGISTRATION NUMBER: BPI-00672
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
TELEPHONE: 609-409-3035
TELEFAX: 413-254-9245
TELEX: 4Unknown>
INFORMATION FOR SEQ ID NO: 772:
SEQUENCE CHARACTERISTICS:
APPLICATION NUMBER: US 08/472,527
                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 772:
US-09-093-972C-772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Meyers, Philip G.
REGISTRATION NUMBER: 30,478
REFERENCE/DOCKET NUMBER: 204 854
TELECOMMUNICATION INFORMATION:
TELEPHONE: (414)289-3761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPAX: (414)289-3791
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
TYPE: NUCLEC ACID
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                     LENGTH: 11 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 90.0°
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 GCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GCCGCCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TOPOLOGY: linear
US-08-025-038-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 85
US-08-025-038-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
```

```
Containing a Genomic DNA Insert of the KI and OX-2 Regions
                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                     Gaps
                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Wadsworth, Samuel
APPLICANT: Snyder, Benjamin
APPLICANT: Reddy, Vermuri, B.
APPLICANT: Wei, Chamer
TITLE OF INVENTION: A cDNA Genomic Hybrid Sequence Encoding APP770
Patent No. S604131
TITLE OF INVENTION: Containing a Genomic DNA Insert of the KI and O
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
Score 8.4; DB 1; Length 12;
Pred. No. 48;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 30309-3450
COMPUTER READABLE FORM:
MEDTION TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/123,702
FILING DATE: 11-SEPT-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Pabst, Patrea L.
REGISTRATION NUMBER: 31,284
REFERENCE/POCKET NUMBER: TSI121
TELECOMMUNICATION: NEORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; Sequence 654, Application US/08757024; Patent No. 6025339; GENERAL INFORMATION; APPLICANT: Nyce, Jonathan W.
```

```
US-09-151-890B-30/c; Sequence 30, Application US/09151890B; Patent No. 6420109
                                                                    771:
                                                                                                                                                                        ; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-757-024-771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                         52.5%;
      TELEPHONE: 919-881-3140
TELEFAX: 919-881-3175
                                            TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 12 base pairs
                                                                                                                                                                                                                                                                             Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                GCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                     1 GGCGGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12 GCCGGTATCG 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 30
LENGTH: 12
                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .,
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 771, Application US/08757024
Patent No. 6025339
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON
STREET: P.O. Drawer 34009
CITY: Charlotte
STATE: USA
COUNTRY: USA
                                                                                                                                                    COUNTRY: USA
ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: SIDLEY, Kenneth D.
REGISTRATION NUMBER: 31,665
REFERENCE/DOCKET NUMBER: 5218-41
TELECOMMUNICATION HYPORMATION:
TELEPHONE: 919-881-3140
TELEEX: 575102
TELEX: 575102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ISM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA WINDERN OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON STREET: P.O. Drawer 14009
CITY: Charlotte
STREET: No. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Sibley, Kenneth D. REGISTRATION NUMBER: 31,665 REFERENCE/DOCKET NUMBER: 521 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Overy Match
Best Local Similarity 90.07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-757-024-654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-757-024-771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
ö
                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: (1)...(12)

TOTHER INFORMATION: synthesized test oligonucleotide for biniding CHER INFORMATION: studies

1. OTHER INFORMATION: studies
18.09-393-783A-30
                                                                                                                                              GENERAL INCORNATION:
APPLICANT: Gary P. Schroth
APPLICANT: Thomas Wayne Bruice
APPLICANT: Young J. Sub
TITLE OF INVENTION: Nucleic Acid Ligand Interaction Assays
FILE REFERENCE: 4600-0128
CURRENT APPLICATION NUMBER: US/09/151,890B
CURRENT FILING DATE: 1998-09-11
NUMBER OF SEQ ID NOS: 80
SOFTWARE: FastSEQ for Windows Version 3.0
 DB 1; Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 52.5%; Score 8.4; DB 1; Length 12; Best Local Similarity 90.0%; Pred. No. 48; Matches 9; Conservative 0; Mismatches 1; Indels
Score 8.4; DB Pred. No. 48; 0; Mismatches
```

35

Page

ö

```
RESULT 92
US-093-972C-771
US-09-093-972C
; Sequence 771, Application US/09093972C
; Patent No. 6825174
; GENERAL INPORMATION:
APPLICANT: NYCE, Jonathan W.
; TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
; TITLE OF INVENTION:
BRONCHOCONSTRICTION, ALLERGY(IES) & INPLAMMATION
                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 8.4; DB 1; Length 12; Pred. No. 48; 0; Mismatches 1; Indels
             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC. STREET: 7 Clarke Drive
                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Amzel, Viviana
REGIGTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 771:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 93
US-09-1154-750A-12/c
; Sequence 12, Application US/09154750A
; Patent No. 6432640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 09-Jun-1998
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 08512
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: 609-409-3035
           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 12 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 771:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEX: <Unknown>
           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9; Conservative
                                                    2 GCCGGCCGC 11
                                                                                           3 GGAGGGCGC 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-093-972C-771
           ٠.
د
      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                    ઠે
                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 654, Application US/09093972C
Sequence 654, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                ö
                                                                                       ; LOCATION: (1)._.(12)
; OTHER INFORMATION: Synthesized test oligonucleotide for binidng
; OTHER INFORMATION: Studies
US-09-151-8908-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: FLORDY disk
COMPUTER: FLORDY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/NS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <UNKnown>
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 7-June-1998
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 48;
                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                52.5%; Score 8.4; DB 1; 90.0%; Pred. No. 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
                                                                                                                                                                                                                         Pred. No. 48;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: DNA (genomic) SEQUENCE DESCRIPTION: SEQ ID NO: 654: US-09-093-972C-654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 609-409-3035
TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 12 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: 654:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 08512
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Cranbury
STATE: New Jersey
                                                                                                                                                                                            Query Match 52.5
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FELEX: <Unknown>
                                                                                                                                                                                                                                                                                     6 GGCGGCATCG 15
                                         FEATURE:
NAME/KEY: misc binding
LOCATION: (1)...(12)
                                                                                                                                                                                                                                                                                                                     GGCGGTATCG 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-093-972C-654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                              셤
```

```
6 GGCGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGCCACCGT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-07-778-233B-77
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 94
US-10-228-876-1/C
US-10-228-876-1/C
Sequence 1, Application US/10228876
Patent No. 6733996
GENERAL INFORMATION,
APPLICANT: Froehlich, Allan C.
APPLICANT: Loros, Jennifer J.
TITLE OF INVENTION: METHODS FOR REGULATING GENE EXPRESSION USING LIGHT
FILE REFERENCE: DC-0194
CURRENT APPLICATION NUMBER: US/10/228,876
CURRENT PILING DATE: 2002-08-26
NUMBER OF SEQ ID NOS: 29
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 77, Application US/07778233B
Fatent No. 5270170
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Schaff F.
APPLICANT: Cull, Milard G.
APPLICANT: Cull, Milard G.
APPLICANT: Miller, Jeff F.
TITLE OF INVENTION: Peptide Library and Screening Method
NUMBER OF SEQUENCES: 78
CORRESPONDENCE ADDRESS:
ADDRESSEE: William M. Smith
STREET: One Market Plaza, Steuart Tower, Suite 2000
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 48; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                         Length 10;
                                                                                                                                                                                                                                                                                                                                                                                         50.0%; Score 8; DB 1;
100.0%; Pred. No. 48;
tive 0; Mismatches
          APPLICANT: Vogelstein, Bert
APPLICANT: Kinzler, Kenneth
APPLICANT: Kinzler, Kenneth
APPLICANT: Kinzler, Kenneth
APPLICANT: Kinzler, Kenneth
APPLICANT: Polyak, Kornelia
FILE REFERENCE: 1107.75357
CURRENT APPLICATION NUMBER: US/09/154,750A
CURRENT FILING DATE: 1998-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1997-09-17
PRIOR FILING DATE: 1998-03-30
NUMBER OF SEQ ID NOS: 93
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Neurospora crassa
                                                                                                                                                                                                                                                                                                                                                                         Query Match 50.0
Best Local Similarity 100.
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 GCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 GCGCCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CGGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9 CGGCGGGC 2
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 95
US-07-778-233B-77
                                                                                                                                                                                                                                                                                                                                                   US-09-154-750A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-228-876-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 1
LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d
```

```
COMPUTER READABLE FORM:
MEDIUM TYPE RADABLE FORM:
MATCHER FRANCHING AND THE MATCHER STATES
FILLING DATE: 19311016
GLASSIFICATION: 415.326.430
FILLING DATE: 19311016
FILLING DATE: 1931016
FIL
```

```
GEMERAL INFORMATION:

APPLICANT: SCAPET J.

APPLICANT: Cull, Millard G.

APPLICANT: Cull, Millard G.

APPLICANT: Stemmer, Millard G.

APPLICANT: Stemmer, Millard B.C.

APPLICANT: Stemmer, Millard P.C.

APPLICANT: Gates, Christian M.

TITLE OF INVENTION: Peptide Library and Screening Method NUMBER OF SEQUENCES: 162

CORRESPONDENCE ADDRESS: 162

CORRESPONDENCE ADDRESS: ADDRESSEE: William M. Smith STREET: One Market Plaza, Steuart Tower, Suite 2000

CITY: San Francisco

CITY: San Francisco

CITY: San Francisco

COUNTRY: USA

ZIP: 94105

COMPUTER: IBM PC Compatible

COMPUTER: IBM PC Compatible

COMPUTER: Batenin Release #1.0, Version #1.25

CUMSENT APPLICATION DATA:

APPLICATION NUMBER: US/08/548,540

FILING DATE: 26-OCT-1995

CLASSIFICATION NUMBER: US 08/290,641

FILING DATE: 18-OCT-1994

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/963,321

FILING DATE: 18-OCT-1992

ATTORNEY/AGENT INFORMATION:

NAME: Smith, William M.

NAME: Smith, William M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Schalz, Peter J.
APPLICANT: Cull, Millard G.
APPLICANT: Miller, Jeff F.
APPLICANT: Miller, Willer P.C.
APPLICANT: Gates, Christian M.
APPLICANT: Peptide Library and Screening Method NUMBER OF SEQUENCES: 162
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 7.8; DB
Pred. No. 58;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16528J-001240US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 77, Application PC/TUS9609809
GENERAL INFORMATION:
                                                                                                        ; Sequence 77, Application US/08548540; Patent No. 5733731; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Smith, William M. REGISTRATION NUMBER: 30,223 REFERENCE/DOCKET NUMBER: 16: TELECOMMUNICATION INFORMATION: TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 81.8
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 11 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6 GGCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGCGCCACCGT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: DNA
US-08-548-540-77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT-US96-09809-77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 77, Application US/08290641
; Patent No. 5498530
; GENERAL INFORMATION:
APPLICANT: Schatz, Peter J.
APPLICANT: Cull, Millard G.
APPLICANT: Stemmer, Willem P.C.
TITLE OF INVENTION: Peptide Library and Screening Method
NUMBER OF SEQUENCES: 91
CORRESPONDENCE ADDRESS:
ADDRESSEE: William M. Smith
STREET: One Market Plaza, Steuart Tower, Suite 2000
CITY: San Francisco
STATE: California
COUNTRY: USA
                                                                                                                                                                                                                Query Match

48.8%; Score 7.8; DB 1; Length 11;
Best Local Similarity 81.8%; Pred. No. 58;
Matches 9; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48.8%; Score 7.8; DB 1; Length 11; 81.8%; Pred. No. 58; tive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: rc-LUCS,rs-LUCS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/290,641
FILING DATE: 15-AUG-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/963,321
FILING DATE: 16-OCT-1992
APPLICATION NUMBER: US 07/778,223
APPLICATION NUMBER: US 07/778,223
APPLICATION NUMBER: 15-OCT-1991
ATTORNEY/AGENT INFORMATION:
NAME: SMICH, William M.
REGISTRATION NUMBER: 11509-50-1
TELEPHONE: 415-326-2400
TELEPHONE: 415-326-2422
INFORMATION FOR SEQ ID NO: 77:
SEQUENCE CHARACTERISTICS:
LENGTH: 11 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 94105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                 TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-07-963-321-77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: DNA (genomic)
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 11 base pairs
LYPE: NUCLEIC ACID
STRANDEDNESS: SINGle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 81.8
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                            6 GGCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                        1 GGCGCCACCGT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 GCCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 dececcaceer 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-290-641-77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-290-641-77
                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

Gaps

ö

2; Indels

DB 1; Length 11;

Page 38

```
10 GCTCCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: lin
MOLECULE TYPE:
HYPOTHETICAL: N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 101
US-08-616-844-18/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-480-994-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 18, Application US/08480994
; Sequence 18, Application US/08480994
; Patent No. 5834248
GENERAL INCRWATION:
APPLICANT: FALB, DEAN A.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: TREATMENT AND DIAGNOSIS OF CARDIOVASCULAR DISEASE
NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
STREET: 1155 Avenue of the Americas
COUNTY: New York
STATE: New York
COUNTY: USA
COUNTY: USA
COUNTY: USA
COUNTY: USA
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: DEP C compatible
COMPUTER: DEP C compatible
COMPUTER: DEPLICATION DATA:
CORPUTER: PatentIn Release #1.0, Version #1.30
CURSENT APPLICATION DATA:
APPLICATION NUMBER: US/08/480,994
FILING DATE: 07-JUM-1995
CLASSIFICATION: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match

48.8%; Score 7.8; DB 1; Length 11;
Best Local Similarity 81.8%; Pred. No. 58;
Matches 9; Conservative 0; Mismatches 2; Indels
ADDRESSEE: William M. Smith
STREET: One Market Plaza, Steuart Tower, Suite 2000
CITY: Can Francisco
STATE: California
                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US96/09809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16528J-001240US
                                                                                                                                                                                                                                                                                                           FILING DATE:
CLASSIFICATION INTERENT FILINGSSON USEN CLASSIFICATION DATA:
PRIOR PAPLICATION DATA:
APPLICATION NUMBER: US 08/548,540
FILING DATE: 26-OCT-1995
APPLICATION NUMBER: US 08/290,641
FILING DATE: 15-AUG-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/963,321
FILING DATE: 15-OCT-1992
ATTOCNEY/AGENT INFORMATION:
NAME: Smith, William M.
REGISTRATION NUMBER: 30,223
REFERENCE/DOCKET NUMBER: 16528J-0012
TELEPHONE: 415-326-2400
                                                                                                                      ZIP: 94105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 415-326-2422
INFORMATION FOR SEQ ID NO: 77:
SEQUENCE CHARACTERISTICS:
LENGTH: 11 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 GGCGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ĠĠĊĠĊĊĂĊĊĠŸ 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCT-US96-09809-77
                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
```

```
PRIOR APPLICATION NUMBER: US 00/485,773
PRIOR APPLICATION NUMBER: US 00/485,773
PRIOR APPLICATION NUMBER: US 00/485,844
ATTORNEY AGENT INTOMENTION:
NUMBER: 00-101-1995
PRIOR APPLICATION NUMBER: US 00/386,844
ATTORNEY AGENT INTOMENTION:
NUMBER: 00-101-1905
PRIOR REGISTRATION NUMBER: US 0.742
PRIOR REGISTRATION NUMBER: US 0.744
PRIOR REGISTRATION NUMBER: US 0.745
PRIOR REGISTRATION NUMBER: US 0.745
PRIOR REGISTRATION NUMBER: US 0.745
PRIOR APPLICATION NUMBER: US 0.745
PRIOR PRIOR PRIOR NUMBER: US 0.745
PRIOR PRIOR PRIOR NUMBER: US 0.745
PRIOR PRIOR PRIOR NUMBER:
```

88.9%;

```
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                        US-08-734-973-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-734-973-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                     ò
                                                                                                                              a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-599-654-18/c

| Sequence 18, Application US/08599654
| Patent No. 5882054
| Patent No. 5882054
| Patent No. 5882054
| GENERAL INFORMATION:
| APPLICANT: FALB, DEAN A
| TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
| TITLE OF INVENTION: TREATMENT AND DIAGNOSIS OF CARDIOVASCULAR DISEASE
| NUMBER OF SEQUENCES: 54
| CORRESPONDENCE ADDRESS:
| ADDRESSEE: PENNIE & EDMONDS
| STREET: 1155 Avenue of the Americas
| CITY: New York
| CITY: New York
                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                      Query Match
46.3%; Score 7.4; DB 1; Length 10;
Best Local Similarity 88.9%; Pred. No. 64;
Matches 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CUUNTRY: NEW YORK

ZIP: 10036-2711

COMPUTER READBALE FORM:
MEDIUW TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/599,654
FILING DATE: 09-FEB-1996
CLASSIFICATION NUMBER: US/08/599,654
FILING DATE: 07-UNN-1995
PILING DATE: 07-UNN-1995
PILING DATE: 07-UNN-1995
ATTORNEY/AGENT INFORMATION:
NAME: CORUZZI, LAURA A
REGISTRATION NUMBER: 30,742
REFERENCE/DOCKET NUMBER: 30,742
REFERENCE/DOCKET NUMBER: 30,742
RELEPHAN: (212) 790-9090
TELEPHAN: (212) 869-8864
                                                                                                                                                                                    MOLECULE TYPE: other nucleic acid DESCRIPTION: /desc = "synthetic oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: other nucleic acid
DESCRIPTION: /desc = "synthetic oligonucleotide"
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                   6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                              10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                    ; HYPOTHETICAL: NO US-08-616-844-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic
STRANDEDNESS:
TOPOLOGY: line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-599-654-18
                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

46.3%; Score 7.4; DB 1; Length 10;

Query Match

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 18, Application US/08485573
| Patent No. 5968770
| GENERAL INFORMATION:
| APPLICANT: FALB, DEAN A. TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TITLE OF INVENTION: TREATMENT AND DIAGNOSIS OF CARDIOVASCULAR DISEASE; NUMBER OF SEQUENCES: 38
| CORRESPONDENCE ADDRESS: SEQUENCES: PERNIE & EDMONDS STREET: 1155 Avenue of the Americas CITY: New York
                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46.3%; Score 7.4; DB 1; Length 10;
                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: Buffalo STATE: New York COUNTRY: United To STATE: New York STATE: New York COUNTRY: United To STATE: New York STATE: New Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Stoler, Daniel L.
APPLICANT: Stoler, Mark
APPLICANT: Adderson, Garth R.
TITLE OF INVENTION: A Rapid Means For Quantitating
TITLE OF INVENTION: Genomic Instability
NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hodgson, Russ, Andrews, Woods & Goodye
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: Bluew York

COUNTRY: United States

ZIP: 14203-2391

COMPUTER: ReadAble FORM:

MEDIUM TYPE: Diskette, 3.5 inch
COMPUTER: IBM Compatible
OPERATURG SYSTEM: MS-DOS, Microsoft Windows
SOFTWARE: Wordperfect for Windows
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/734,973
FILING DATE: October 1996
ATTORNEY/AGENT INFORMATION:
NAME: Nelson, M Bud 35,300
REGISTRATION NUMBER: 35,300
REPRENCE/DOCKET NUMBER: 35,300
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFRAX: (716) 856-4000
INFORMATION FOR SEQ ID NO: 14 :
SEQUENCE CHARACTERISTICS:
LENGTH: 10 nucleides
Pred. No. 64;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Sequence 14, Application US/08734973
; Patent No. 5912147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8; Conservative
                                                                                                                            6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GCGGGCGGC 11
                                                                                                                                                                                          10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 104
US-08-485-573-18/c
```

```
6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                      HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                        US-08-944-868A-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: FALB, DEAN A
TITLE OF INVENTION:
COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: TREATMENT AND DIAGNOSIS OF CARDIOVASCULAR DISEASE
NUMBER OF SEQUENCES: 54
CORRESPONDENCE ADDRESS:
ADDRESSEE: PENNIE & EDMONDS
STREET: 1155 Avenue of the Americas
CITY: New York
STATE: New York
COUNTRY: USA
ZIP: 10036-2711
COMPUTER FRADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/944,868A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                   COMPUTER: 1BM PC compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,573
FILING DATE: 07-JUN-1995
CLASSIFICATION: 800
PRIOR APPLICATION 800
PRIOR APPLICATION NUMBER: US 08/386,844
FILING DATE: 10-FEB-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 7.4; Di
Pred. No. 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/599,654
FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/386,844
FILING DATE: 10-PEB-1995
                                                                                                                                                                                                                                                                                                                                              7853-032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-944-868A-18/c
; Sequence 18, Application US/08944868A
; Patent No. 6018025
                                                                                                                                                                                                                                                                                               NAME: Coruzzi, Laura A.
REGISTRATION NUMBER: 30,742
REPRENCE/DOCKET NUMBER: 7853-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 869-8864
TELEFAX: (212) 869-8864
ILEFAX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: DNA (genomic)
-485-577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 88.9%;
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 10 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
ZIP: 10036-2711
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-485-573-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
```

```
PATORNEY/AGENT INFORMATION:

NAME: COMIZELL LAUGA A

REGISTRATION NUMBER: 30,742

FERICOMENTIAL THORNATION:

FERICOMENTIAL THORNATION:

FERICOMENTIAL THORNATION:

FERICOMENTIAL THORNATION:

FERICOMENTIAL TO A PROPERATION:

FERENCE CHANACTERISTICS:

FERENCE CHANACTERISTICS:

FERENCE CHANACTERISTICS:

FERENCE CHANACTERISTICS:

FERENCE CHANACTERISTICS:

FERENCE CHANACTERISTICS:

FORDER TO FERENCE FORDER FOR THE FORDER TO FERENCE FORDER FOR THE FORDER TO FERENCE FORDER FOR THE FORDER FOR THE FORDER FOR THE FORDER FORDER FOR THE FORDER FORDER FOR THE FORDER FOR THE FORDER FOR THE FORDER FOR THE FORDER FORDER FOR THE FORDER F
```

```
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
                                                                                                                                                                                                                                                                                                                          Score 7.4; DB 1; Length 10; Pred. No. 64; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-757-024-678

| Sequence 678 Application US/08757024
| Partent No. 6025339
| Fartent No. 6025339th Carolina North N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CUNTRY: USA

ZIP: 28234

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31.665
FURNING NUMBER: 31.665
FURNING NUMBER: 31.665
FURNING NUMBER: 31.665
                                                                        TOPOLOGY: linear MOLECULE TYPE: other nucleic acid DESCRIPTION: /desc = "synthetic oligonucleotide" HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 46.3%; Score 7.4; Di
Best Local Similarity 88.9%; Pred. No. 64;
Matches 8; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5218-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-757-024-789
; Sequence 789, Application US/08757024
; Patent No. 6025339
; GENERAL INFORMATION:
; APPLICANT: Nyce, Jonathan W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 52
TELECOMMUNICATION INFORMATION:
TELEFHONE: 919-881-3175
TELEFA: 575102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; MOLECULE TYPE: DNA (genomic) US-08-757-024-678
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 88.9%;
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                          single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGAGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                              US-08-944-423A-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
```

```
GENERAL INFORMATION:
APPLICANT: FALB, DEAN A.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: TREATMENT AND DIAGNOSIS OF CARDIOVASCULAR DISEASE
NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
ADDRESSER: PENNIE & EDMONDS
STREET: 1155 Avenue of the Americas
CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                          COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: Elappy disk
COMPUTER: Ela PC Compatible
COMPUTER: Ela PC Compatible
COPERATIOG SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 13.4
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 5218-41
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
TELEPHONE: 919-881-3140
TELERX: 575102
INFORMATION FOR SEQ ID NO: 789:
SEQUENCE CHRRACTERISTICS:
LENGTH: 10 base pairs
TYPE: nucleic caid
STERANDESS: cinda
FITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: USA
ZIP: 10036-2711
COMPUTER RADABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/925,743
                       NUMBER OF SEQUENCES: 952
CORRESSONDERS ADDRESSE:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON
STREET: P.O. Drawer 34009
CITY: Charlotte
STATE: No. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 7.4;
Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-925-743-18/c
; Sequence 18, Application US/08925743
; Patent No. 6054558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/485,573
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7 GCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GCGCCATGG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-757-024-789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
```

```
ADDRESSEE: PENNIE & EDMONDS
STREET: 1155 Avenue of the Americas
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                     ; Sequence 18, Application US/08925767; Patent No. 6225084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Coruzzi, Laura A. REGISTRATION NUMBER: 30,742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 88.5%,
Best Local Similarity 88.5%,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (212) 869-8864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGIH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nucleic acid
                                                                                                                                                                                                                                                              6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                   10 GGCTGCATC 2
                                                              TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                      HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                              RESULT 111
US-08-925-767-18/c
                                                                                                                           ; hrving...
US-08-944-496-18
                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent No. 6124433

Batent No. 6124433

GENERAL INFORMATION:

PAPLICANT: FALB, DEAN A

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE

TITLE OF INVENTION: TREATMENT AND DIAGNOSIS OF CARDIOVASCULAR DISEASE

NUMBER OF SEQUENCES: 54

CORRESPONDENCE ADDRESS:

ADDRESSE: PENNIE & EDMONDS LLP
STREET: 1155 Avenue of the Americas

CITY: New York

STATE: New York

STATE: New York

STATE: New York

STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                                                                                                                                   46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 64; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: RADABLE FORM:
MEDIUM TYPE: RADABLE FORM:
MEDIUM TYPE: RADABLE FORM:
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/944,496
FILING DATE: 06-CCT-1997
CLASSIFICATION NUMBER: US 08/599,654
FILING DATE: 09-FEB-1996
PRIOR APPLICATION NUMBER: US 08/599,654
FILING DATE: 07-UN-1995
PRIOR APPLICATION NUMBER: US 08/485,573
FILING DATE: 07-UN-1995
PRIOR APPLICATION NUMBER: US 08/485,573
FILING DATE: 10-FEB-1995
ATTORNEY/AGENT INFORMATION:
NAME: CORUZZI, LAURA A
NAME: Coruzzi, Laura A.
REGIESTRATION UNUBER: 30,742
REFERENCE/DOCKET NUMBER: 7853-032
TELECOMMUNICATION INFORMATION:
TELEFONE: (212) 790-9090
TELEFAX: (212) 869-8864
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
TYPE: nucleic acid
TYPE: nucleic acid
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7853-104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: CORUZZI, LAURA A
REGISTRATION NUMBER: 30,742
REFERENCE/DOCKET NUMBER: 78
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: DNA (genomic) HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (212) 790-9090
(212) 869-8864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 88.5
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 110
US-08-944-496-18/c
                                                                                                                                                                                                                                                                                                                                                              US-08-925-743-18
                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: FALB, DEAN A.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
TITLE OF INVENTION: TREATMENT AND DIAGNOSIS OF CARDIOVASCULAR DISEASE
NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                      Gaps
                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                            Query Match 46.3%; Score 7.4; DB 1; Length 10; Best Local Similarity 88.9%; Pred. No. 64; Matches 1; Indels Matches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CUNTRY: New York
COUNTRY: New York
COUNTRY: USA
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEB PC compatible
COMPUTER: PEDPY disk
COMPUTER: PEDPY disk
COMPUTER: PED PC compatible
COMPUTER: PED PC compatible
COMPUTER: PED PC compatible
COMPUTER: PED PC compatible
COMPUTER: DatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/925,767
FILING DATE: 09-SEPT-1997
CLASSIFICATION NUMBER: US 08/485,573
FILING DATE: 07-UN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/386,844
FILING DATE: 10-FEB-1995
ATTORNEY/AGENT INFORMATION:
NAME: CCILIZI, LBULRA A.
MOLECULE TYPE: other nucleic acid DESCRIPTION: /desc = "synthetic oligonucleotide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 7.4; DB
Pred. No. 64;
0; Mismatches
```

```
LENGTH: 10
                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                 RESULT 115
                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                             g
  US-09-889-595-18/c
; Sequence 18, Application US/09889595
; Patent No. 6410749
; Patent No. 6410749
; Patent No. 6410749
; TITLE OF INVENTION: PROMOTERS FOR GENE EXPRESSION IN CARYOPSES OF PLANTS
; TITLE OF INVENTION: DAMPER: US/09/889,595
; CURRENT PILIGATION NUMBER: US/09/889,595
; CURRENT PILING DATE: 2001-07-05
; PRIOR APPLICATION NUMBER: DE 100 32 379.0
; PRIOR FILING DATE: 2000-07-05
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 18
; LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NGS-09-699-595-18/C

Sequence 18, Application US/09899595

Patent No. 6794539

GENERAL INFORMATION:

TILLE OF INVENTION: Promocers for gene expression in caryopses of plants

TILLE OF INVENTION: Promocers for gene expression in caryopses of plants

TILLE OF INVENTION: Promocers for gene expression in caryopses of plants

TILLE OF INVENTION: PROMOCER: 514413-3885

CURRENT APPLICATION NUMBER: US/09/899,595

CURRENT PILING DATE: 2001-07-05

PRIOR APPLICATION NUMBER: DE 100 32 379.0

PRIOR FILING DATE: 2000-07-05

NUMBER OF SEQ ID NOS: 18

SEQ ID NO 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 2, Application US/10228876

Batent No. 6733996

GRNERAL INFORMATION:
APPLICANT: Information, Allan C.
APPLICANT: Droco, Jennifer J.
APPLICANT: Dunlap, Jay C.
TITLE OF INVENTION: METHODS FOR REGULATING GENE EXPRESSION USING LIGHT CURRENT APPLICATION UMBER: US/10/228,876

CURRENT APPLICATION UMBER: 2002-08-26

NUMBER OF SEQ ID NOS: 29

SOFTWARE: Patentin Version 3.1

SEQ ID NO 2

LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 7.4; DB 1; Length 10;
Pred. No. 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 64;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                46.3%;
                                                                                                                                                                                                                                                                                                                                                     ; TYPE: DNA
; ORGANISM: Triticum aestivum
US-09-889-595-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Neurospora crassa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 88.9
Matches 8, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7 GCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 GGCGGCCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9 GCCTCATCG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 113
US-10-228-876-2/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-228-876-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
```

```
Sequence 678, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
E TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                     Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                  Score 7.4; DB 1; Length 10;
Pred. No. 64;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 08512
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: TYPE Floppy disk
COMPUTER: TYPE FOOMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match

46.3%; Score 7.4; DB 1;
Best Local Similarity 88.9%; Pred. No. 64;
Matches 8; Conservative 0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <UNKNOWN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Amzel, Viviana
REGIGTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear:

MOLECULE TYPE: DNA (genomic)

SEQUENCE DESCRIPTION: SEQ ID NO: 678:
US-09-093-972C-678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: 678: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                                                                    46.3%;
                                          Query Match
Best Local Similarity 88.30,
hea 8; Conservative
; ORGANISM: Triticum aestivum
US-09-899-595-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Cranbury
STATE: New Jersey
                                                                                                                                                         2 GGCGGCGG 10
                                                                                                                                                                                       10 GGCGGCCGG 2
                                                                                                                                                                                                                                                                                               US-09-093-972C-678
```

```
APPLICANT: Thomas, Eita L.

APPLICANT: Kongpachith, Ana
APPLICANT: Kongpachith, Ana
APPLICANT: Sheppard, Liana T.

APPLICANT: Lim, Moon Young
APPLICANT: Bruice, Thomas W.

TITLE OF INVENTION: PROMOTERS FOR REGULATED GENE EXPRESSION
TITLE OF INVENTION: PROMOTERS FOR REGULATED GENE EXPRESSION
FILE REFERENCE: 54600-8135.USG0
CURRENT APPLICATION NUMBER: US/09/875,453B
CURRENT APPLICATION NUMBER: US 60/209,549
PRIOR APPLICATION NUMBER: US 60/209,549
PRIOR APPLICATION NUMBER: US 60/209,549

PRIOR SEQ ID NOS: 246
SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 194
LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 64; 1; Indels ative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-07-668-353A-36
Sequence 36, Application US/07868353A
Sequence 36, Application US/07868353A
Sequence 36, Application US/07868353A
Sequence 36, Application US/07868353A
TITLE OF INVENTION:
MUNICAL OF INVENTION:
Gustducin Materials and Methods
NUMBER OF SEQUENCES: 36
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
ADDRESSEE: Bicknell!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/868,353A
FILING DATE: 19920409
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: No. 568862and, Greta E.
REFERENCE/DOCKET NUMBER: 28038/30793
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: Two First National Plaza, 20 South Clark STREET: Street CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 60603
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: mutated sequence US-09-875-453B-194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : (312) 346-5750
(312) 984-9740
  Laurance, Megan E.
Michelotti, Emil E
                                               Velligan, Mark D.
Latour, Derek R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEX: 25-3856
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 10 base pairs
TYPE: NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCGGCCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGCGCGCGG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
کمع 8; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Chicago
STATE: Illinois
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: NUCLE:
STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX:
                                                                   APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                RESULT 116
US-09-033-972C-789
US-09-033-972C-789
; Sequence 789, Application US/09093972C
; Patent No. 6825174
; GENERAL INFORMATION:
; TILLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
; TILLE OF INVENTION: COMPOSITION, DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: Tam PC compatible
COMPUTER: Tam PC compatible
COMPUTER: Tam PC compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION LONG.
PRIOR APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 7-June-1998
ATTORNEY/AGENT INFORMATION:
ANTORNEY/AGENT INFORMATION:
ANTORNEY/AGENT INFORMATION:
ANTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 64; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)

SEQUENCE DESCRIPTION: SEQ ID NO: 789:
US-09-093-972C-789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 194, Application US/09875453B Patent No. 6838556 GENERAL INPORMATION: APPLICANT: Kim, Jungsuh P. APPLICANT: Starr, Douglas B. APPLICANT: Tam, Albert W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 609-409-3035
TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX: «Unknown»
INFORMATION FOR SEQ ID NO: 789:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                             CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 GCGGCATCG 15
2 GGAGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GCGGCATGG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-875-453B-194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
吕
```

Gaps

```
Query Match
Best Local Similarity luv...
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 10 base pairs
                                                                                                                                                                                                              STATE: Massachusetts
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
   SENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; ANTI-SENSE: NO
US-08-477-396A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 121
US-08-460-751-34/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                        43.8%; Score 7; DB 1; Length 10; 100.0%; Pred. No. 77; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                         Sequence 45, Application US/08407804

Sequence 45, Application US/08407804

GENERAL INFORMATION:

TITLE OF INVENTION: Gustducin Materials and Methods

NUMBER OF SEQUENCES: 46

CORRESPONDENCES: 46

CORRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Borun

STREET: 6300 Sears Tower, 233 S. Wacker Drive

CITY: Chicago

STREET: 111inois

COUNTRY: USA

ZIP: 60606-6402

COMPUTER: READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC Compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOPTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43.8%; Score 7; DB 1;
100.0%; Pred. No. 77;
live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/045,801
FILING DATE:
APPLICATION NUMBER: US 07/868/353
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: No. 5817759and, Greta E.
REGISTRATION NUMBER: 35,302
REDENENCE/DOCKET NUMBER: 31342
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 174-6300
TELEFRAX: (312) 474-6448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-477-396A-11/c
; Sequence 11, Application US/08477396A
; Patent No. 5872235
                                                     Query Match
Best Local Similarity 100...
7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: single
                 ; MOLECULE TYPE: DNA
US-07-868-353A-36
                                                                                                                                                   s geeceec 11
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5 GGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGGCGGC 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                 US-08-407-804-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-407-804-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 120
                                                                                                                                                   ઠે
                                                                                                                                                                                    а
```

1...

Gaps

.

0; Indels

Length 10;

```
43.8%; Score 7; DB 1; Length 10; 100.0%; Pred. No. 77; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER PORM:

MEDIUM TYPE: Floppy disk
COMPUTER: Ploppy disk
COMPUTER: Ploppy disk
COMPUTER: Ploppy disk
COMPUTER: Plam PC Compatible
COMPUTER: Plam PC Compatible
COMPUTER: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: D4.06/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 214
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION: S14
ATTORNEY/AGENT INFORMATION:
TELESTRATION NUMBER: 5218-41
TELECOMMUNICATION INFORMATION:
TELEFRAX: 919-881-3140
TELEFRAX: 919-881-3175
TELERAX: 919-881-3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON
STREET: P.O. Drawer 34009
CITY: Charlotte
STATE: No. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                          43.8%; Score 7; DB 1
100.0%; Pred. No. 77;
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-757-024-843
; Sequence 843, Application US/08757024
; Patent No. 6025339
     REGISTRATION NUMBER: 35,302
REFERENCE/DOCKET NUMBER: 313
FELECOMMUNICATION INFORMATION:
TELEPHONE: (312) 474-6300
TELEFAX: (312) 474-0448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: DNA (genomic)
                                                                                                                           TELEX:
INFORMATION FOR SEQ ID NO: 4
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
                                                                                                                                                                                                                                                                                                  ; TOPOLOGY: linear; MOLECULE TYPE: DNA US-09-124-807-45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 GGCGGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGCGGC 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: nucleic
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 28234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-757-024-843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WES-09-124-807-45
US-09-124-807-45
Sequence 45, Application US/09124807
Sequence 45, Application US/09124807
Sequence 45, Application US/09124807
TETLE OB 6008000
SEMERAL INFORMATION:
MUDMER OF INVENTION:
MUDMER OF SEQUENCES: 46
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & ADDRESSEE: Borun
STREET: 6300 Sears Tower, 233 S. Wacker Drive
CITY: Chicago
STATE: Illinois
COUNTRY: USA
ZIP: 6060-6402
COMPUTER: IBM PC compatible
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATEMIN PC-DOS/MS-DOS
SOFTWARE: PATEMIN DATA:
FILLOATION NUMBER: US/09/124,807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 10;
                                                                                                                                                                         CURRENT APPLICATION DATA:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/460,751
FILING DATE: 02-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:

APPLICATION WHERE: US 08/413,580
FILING DATE: 03-MAR-1995
ATTORNEY/AGRNT INFORMATION:

NAME: COTUZZI, LBUIRA A.

REGISTRICATION NUMBER: 30,742
REFERENCE/DOCKET NUMBER: 7638-005
TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELETEX: 6614 PENINE

INFORMATION FOR SEQ ID NO: 34:

SEQUENCE CHARACTERISTICS:

LLOGTH: 10 base pairs

LWOTH. 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/407,804
FILING DATE:
PLING DATE: 09-APR-1992
FILING DATE: NO-APR-1992
ATYONEV/AGENT INFORMATION:
NAME: NO. 6008000and, Greta E.
STATE: New York
COUNTRY: U.S.A.
ZIP. 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMDALIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: unknown
; MOLECULE TYPE: DNA (genomic)
US-08-460-751-34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 10 base pairs
TYPE: nucleic acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10 GCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10 GCATCGT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

ö

Gaps

ö

0; Indels

```
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 873, Application US/08757024
; Patent No. 6025339
; GENERAL INFORMATION:
APPLICANT: NYCe, Jonathan W.
ITILE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
ADDRESSEE: BELL, SELTZER, PARK & GIBSON
STREET: P.O. Drawer 34009
CITY: Charlotte
STATE: NO. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compartible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                43.8%; Score 7; DB 1
100.0%; Pred. No. 77;
tive 0; Mismatches
  CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION UNBER: 31,665
REFERENCE/DOCKET NUMBER: 5218-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
TELEFA: 919-881-3175
TELERX: 575102
INFORMATION FOR SEQ ID NO: 864:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REFRENCE/DOCKET NUMBER: 5218
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919-881-3140
TELEFAX: 919-881-3175
                                                                                                                                                                                                                                                                                                               ; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-757-024-864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
26-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-757-024-873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 125
US-08-757-024-864
i Sequence 864 Application US/08757024
j Fatent No. 6025339
i GENERAL INFORMATION:
i TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES: 952
CORRESPONDENCE ADDRESS:
j ADDRESSEE: BELL, SELTZER, PARK & GIBSON
STREET: PO. Drawer 34009
CITY: Charlotte
STATE: No. 6025339th Carolina
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 10;
                                             Sequence 854, Application US/08757024
Patent No. 6025339
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: METHOD OF TREATMENT FOR ASTHMA
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSE: BELL, SELIZER, PARK & GIBSON
STREET: P.O. Drawer 34009
CITY: Charlotte
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                    COMPUTER EASTAL
MEDIUM TYPE: Floppy disk
COMPUTER: EN PC compatible
COMPUTER: EN PC compatible
OPERATION SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
FILING DATE: 26-NOV-1996
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Sibley, Kenneth D.
REGISTRATION NUMBER: 31,665
REPERENCE/POCKET NUMBER: 5218-41
TELECOMMULCATION INFORMATION:
TELECOMMULCATION INFORMATION:
TELEPHONE: 919-881-3140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUPTRY: USA
ZIP: 28234
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMpatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/757,024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43.8%; Score 7; DB 1;
100.0%; Pred. No. 77;
Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEX: 575102
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGCGGGC 8
                                                                                                                                                                                                                                                                                                           ZIP: 28234
                              US-08-757-024-854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-757-024-854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

The second section is a

iss20.res

```
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
TELEFAX: 617-542-8906
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/08631469B
Patent No. 6221840
                                                               43.5.,
100.0%; Pre-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                            7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Boston
STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: US
                                                                                                                                                                                         10 GCATCGT 16
                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                  9 GCATCGT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 130
US-09-255-432-5/c
                                                                                                                                                                                                                                                                                                                                           RESULT 129
US-08-631-469B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-631-469B-4
   US-09-063-450-31
                                                                                                                         Matches
                                                                                                                                                                                         ò
                                                                                                                                                                                                                                               ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Gene Logic, Inc.
APPLICANT: Gene Logic, Inc.
TITLE OF INVENTION: Method and System for Computationally Identifying TITLE OF INVENTION: CLUSTERS Within a Set of Sequences FILE REFERENCE: 77001.002
CURRENT APPLICATION NUMBER: US/09/063,450
CURRENT FILING DATE: 1998-04-21
NUMBER OF SEQ ID NOS: 38
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 31
LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: Description of Artificial Sequence:example OTHER INFORMATION: sequence illustrating a computational methodology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43.8%; Score 7; DB 1; Length 10;
100.0%; Pred. No. 77;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                               Sequence 8, Application US/08476705A

Patent No. 6063755
GENERAL INFORMATION:
TITLE OF INVENTION: INTESTINAL TREFOIL PROTEINS
NUMBER OF SEQUENCES: 12
CORESPONDENCE ADDRESS:
CORESPONDENCE ADDRESS:
CORESPONDENCE ADDRESS:
CONTRY: 225 Franklin Street
CITY: Boston
STREET: 225 Franklin Street
CITY: Boston
STATE: MA
COUNTRY: US
ZIP: 02110-2804
COMPUTER: EADACATEN: DOS
SOFTWARE: FRANKLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPPERATING SYSTEM: DOS
SOFTWARE: FastSEG for Windows Version 2.0
CURSETFICATION NUMBER: US/08476,705A
FILING DATE: 07-JUN-1995
CLASSIFICATION NUMBER: 35,283
REFERENCE/DOCKET NUMBER: 35,283
REFERENCE/ORCHET NUMBER: 35,283
REFERENCE/DOCKET NUMBER: 35,283
REFERENCE/DOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 31, Application US/09063450 Patent No. 6109776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 43.8
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
DEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 GGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGCGGC 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -09-063-450-31/c
                                                                                                                                                                                  US-08-476-705A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-476-705A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
ઠે
                                                      셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                           ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 10;
  Length 10;
                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Daniel K. Podolsky
TITLE OF INVENTION: INTESTINAL TREFOIL PROTEINS
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESSE:
FISH & Richardson, P.C.
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows95
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION DATE: 12-Apr-1996
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Meiklejohn, Ph.D., Anita L.
REGISTRATION NUMBER: 35,283
REFERENCE/DOCKET NUMBER: 00786/322001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1;
43.8%; Score 7; DB 1; 100.0%; Pred. No. 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
                   Pred. No. 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 08/631,469
FILING DATE: 12-APR-1996
FILING DATE: 02-PEB-1994
APPLICATION NUMBER: 08/191,352
APPLICATION NUMBER: 08/037,741
FILING DATE: 25-MAR-1993
FILING DATE: 13-FEB-1992
APPLICATION NUMBER: 07/655,965
FILING DATE: 14-FEB-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear
SEQUENCE DESCRIPTION: SEQ ID NO: 4:
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 132
US-09-313-434C-5
i Sequence 5, Application US/09313434C
i Patent No. 6525018
i GENERAL INFORMATION:
    TITLE OF INVENTION: Intestinal Trefoil Proteins
    FILE REFERENCE: 50206/432001
    CURRENT APPLICATION NUMBER: US/09/313,434C
    CURRENT FILING DATE: 1999-05-17
    PRIOR APPLICATION NUMBER: US 08/131,469
    PRIOR FILING DATE: 1994-02-02
    PRIOR PILING DATE: 1994-02-02
    PRIOR PILING DATE: 1994-02-02
    PRIOR PILING DATE: 1993-03-25
    PRIOR PILING DATE: 1993-02-13
    PRIOR FILING DATE: 1993-02-14
    NUMBER OF SEQ ID NOS: 21
    SOFTWARE PARLESEQ FOR WINDOWS VERSION 4.0
                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: synthetically generated primer US-09-056-868B-5
                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
PRIOR APPLICATION NUMBER: US 08/037,741
PRIOR FILING DATE: 1993-03-25
PRIOR APPLICATION NUMBER: US 07/837,192
PRIOR FILING DATE: 1992-02-13
PRIOR FILING DATE: 1991-02-14
NUMBER OF SEQ ID NOS: 16
NUMBER OF SEQ ID NOS: 16
SEQ ID NO 5
SEQ ID NO 5
LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: Oligonuclectide for PCR
US-09-313-434C-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 226, Application US/09508753B
; Patent No. 6544736
                                                                                                                                                                                                                                                              TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Akira SHIMAMOTO
APPLICANT: Yasuhiro FURUICHI
APPLICANT: Yuko SHIBATA
APPLICANT: Hiroko FUNAKI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 GGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5 GGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGGCGGC 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 133
US-09-508-753B-226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                           Plants Usi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION
PRIOR APPLICATION
PRIOR APPLICATION DATA: Claims Priority to Provisional Application
ATTORNEY/AGENT INFORMATION:
NAME: Judy C. Jarecki-Black, Ph.D.
REGISTRATION NUMBER: P44,170
REGISTRATION NUMBER: CXU-291
TELECOMMUNICATION INFORMATION:
TELEPHONE: (864) 271-1592
TELEPHONE: (864) 271-1592
TELEPHONE: (864) 271-1592
TELEPHONE: (864) 271-1592
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                      APPLICANT: Keinath, et al.

TITLE OF INVENTION: Method of Diagnosing Gummy Stem Blight in NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSEE: Judy C. Jarecki-Black, Ph.D.
ADDRESSEE: Dority & Manning, P.A.
STREET: 700 E. No. 6258537th Street, Suite 15
CITY: Greenville
STATE: SOUTH Carolina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43.8%; Score 7; DB 1; Length 10;
100.0%; Pred. No. 77;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette, 3.50 inch, 1.44 Mb storage COMPUTER: IBM compatible
COMPUTER: IBM compatible
COPERATING SYSTEM: MS Dos; Windows 95
SOFTWARE: WordPerfect 6.1

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/255,432
FILING DATE: Filed Herewith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Commercially Available Primer PUBLICATION INFORMATION: No. 6258537 Applicable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ANTI-SENSE: NO ORIGINAL SOURCE: Operon Technologies (Alemeda, CA) IMMEDIATE SOURCE: Operon Technologies POSITION IN GENOME: No. 6258537 Applicable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 5, Application US/09056868B

Patent No. 6316218

GRBRAL INFORMATION:
APPLICANT: Podolsky, Daniel K.
TITLE OF INVENTION: INTESTINAL TREFOIL PROTEINS
FILE REFERENCE: 00786-066005
CURRENT APPLICATION NUMBER: US/09/056,868B
CURRENT FILING DATE: 1998-01-27
PRIOR APPLICATION NUMBER: US 08/476,705
PRIOR FILING DATE: 1995-06-07
PRIOR FILING DATE: 1995-06-07
PRIOR FILING DATE: 1995-06-07
PRIOR FILING DATE: 1994-02-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: Other Nucleic Acid
DESCRIPTION: Oligonucleotide Primer
HYPOTHETICAL: No
Sequence 5, Application US/09255432
Patent No. 6258537
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 10 Pairs
TYPE: Nucleic Acid
STRANDEDNESS: Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7 GCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8 GCGGCAT 2
                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                              STATE: SC
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 131
US-09-056-868B-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-255-432-5
```

ò

はせなり でいろし

Gaps

```
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
E TREATMENT OF DISBASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .;
0
                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 10;
                                                                                                                                                                                                                                                                                                                                           Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: BRIGENESIS PHARMACEUTICALS, INC.
STREET 7 Clarke Drive
CITY: Cranbury
                                                                                                                                                                                                                                                  OTHER INFORMATION: Commercially Available Primer PUBLICATION INFORMATION: No. 6610487 Applicable US-09-758-073-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION NUMBER: US/09/093,972C
APPLICATION NUMBER: US/08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US/08/472,527
FILING DATE: 26-11-1996
APPLICATION NUMBER: US/08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US/08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US/09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                           DB 1;
                                                                                                                                                            IMMEDIATE SOURCE: Operon Technologies
POSITION IN GENOME: No. 6610487 Applicable
UNITS:
                                                                                                                                                                                                                                                                                                                                           43.8%; Score 7; DB 1
100.0%; Pred. No. 77;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43.8%; Score 7; DB 1
100.0%; Pred. No. 77;
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
TOPOLOGY: linear
;
MOLECULE TYPE: DMA (genomic)
;
SEQUENCE DESCRIPTION: SEQ ID NO: 843:
US-09-093-972C-843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Sequence 843, Application US/09093972C
; Patent No. 6825174
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: TELECOMMUNICATION: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 843:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 43.8
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   7 GCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGGCAT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 135
US-09-093-972C-843
                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
0
; APPLICANT: Biji OHARA
; APPLICANT: Maganori WaTAHIKI
; TITLE OF INVENTION: Method for Synthesizing cDNA from mENA sample
; FILE REFERENCE: 00162/HG
; CURRENT APPLICATION NUMBER: US/09/508,753B
; CURRENT APPLICATION NUMBER: US/09/508,753B
; CURRENT APPLICATION NUMBER: US/09/508,753B
; RILING DATE: 1997-09-18
; NUMBER OF SEQ ID NOS: 472
; SEQ ID NO 226
; LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Keinath, et al.

TITLE OF INVENTION: Method of Diagnosing Gummy Stem Blight in TITLE OF INVENTION: Plants Using a Polymerase Chain Reaction Assay WUWBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS: ADDRESS: ADDRESSE: Judy C. Jarecki-Black, Ph.D. ADDRESSE: Dority & Manning, P.A. STREET: 700 E. No. 6610487th Street, Suite 15
CITY: Greenville
STATE: South Carolina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Description of Artificial Sequence: Primer
US-09-508-753B-226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIGNATE: SOURD CATOLINA
COMPUTER: SOURD CATOLINA
ZIP: 29601
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.44 Mb storage
COMPUTER: IBM compatible
OPERATING SYSTEM: MS Dos; Windows 95
SOFTWARE: WordPerfect 6.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/758,073
FILING DATE: Filed Herewith
CLASSIFICATION DATA:
APPLICATION NUMBER: 60/078,103
FILING DATE: 16-MAR-1998
ATTORNEY/AGENT INFORMATION:
NAME: Judy C. Jarecki-Black, Ph.D.
REGISTRATION NUMBER: CXU-291
FILEDPHONE: G64/ 271-1592
TELEDPHONE: (864) 233-7342
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 Pairs
TYPE: Nucleic Acid
STRANDENESS: Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Operon Technologies (Alemeda,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: Other Nucleic Acid
DESCRIPTION: Oligonucleotide Primer
HYPOTHETICAL: No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 5, Application US/09758073 Patent No. 6610487
                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 GGCATCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9 GGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTI-SENSE: NO
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-758-073-5/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
```

ö

Gaps

```
APPLICANT: Nyce, Jonathan W.

IITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISBASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 873, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BRONCHOCONSTRICTION, ALLERGY(IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: INBW PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRIT APPLICATION DATE:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: «Unknown»
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 10;
                                                                                                       NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESS:
ADDRESSEE: BPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 996
CORRESPONDENCE ADDRESS:
ADDRESSEE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-Unne-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 26-11-1996
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-Unne-1995
APPLICATION NUMBER: US 09/016,464
FILING DATE: 30-January-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: EPI-00672
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE DESCRIPTION: SEQ ID NO: 864: US-09-093-972C-864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: 609-409-3035
TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: «Unknown»
INFORMATION FOR SEQ ID NO: 864:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                       STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
MOLECULE TYPE: DNA (9
                                                                                                                                                                                                    CITY: Cranbury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-093-972C-873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                Sequence 854, Application US/09093972C
Patent No. 6825174
GENERAL INFORMATION:
APPLICANT: Nyce, Jonathan W.
TITLE OF INVENTION: COMPOSITION, FORMULATIONS & METHOD FOR PREVENTION
& TREATMENT OF DISEASES & CONDITIONS ASSOCIATED WITH
BROWCHOCONSTRICTION, ALLERGY (IES) & INFLAMMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CUMUNITIES USAN

CUMUNITIES READABLE FORM:

MEDIUM TYPE: FLORDY disk

MEDIUM TYPE: FLORDY disk

COMPUTER: IBM PC Compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/093,972C

FILING DATE: 09-Jun-1998

CLASSIFICATION NUMBER: US 08/472,527

FILING DATE: 7-June-1995

APPLICATION NUMBER: US 08/757,024

FILING DATE: 7-June-1995

APPLICATION NUMBER: US 08/472,527

FILING DATE: 7-June-1995

APPLICATION NUMBER: US 08/472,527

FILING DATE: 7-June-1995

ATTORNEY/AGENT NUMBER: US 09/016,464

FILING DATE: 30-January-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 10;
                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSE: EPIGENESIS PHARMACEUTICALS, INC.
STREET: 7 Clarke Drive
CITY: Cranbury
STATE: New Jersey
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Amzel, Viviana
REGISTRATION NUMBER: 30,930
REFERENCE/DOCKET NUMBER: EPI-00672
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43.8%; Score 7; DB 1
100.0%; Pred. No. 77;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
SEQUENCE DESCRIPTION: SEQ ID NO: 854:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 137
US-09-093-972C-864
; Sequence 864, Application US/09093972C
; Patent No. 6825174
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: 854:
SEQUENCE CHARACTERISTICS:
LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 413-254-9245
TELEX: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                                                                                            SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                            NUMBER OF
                                                                                                                                                                    US-09-093-972C-854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-093-972C-854
                             ઠ
                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
```

8

```
Length 10;
                                                                                                                                                                                                                                            APPLICANT: Abment, Subilit MappellCANT: Bhasany, Ajit Kumar APPLICANT: Dhawan, Sunita APPLICANT: Dhawan, Sunita MappellCANT: Davokar, Mahendra Pandurang APPLICANT: Dawan, Om Parkash APPLICANT: Singh, Anil Rumar APPLICANT: Shahl, Anil Rumar APPLICANT: Bahl, Janak Raj APPLICANT: Bahl, Janak Raj APPLICANT: Bahl, Janak Raj APPLICANT: Bahl, Janak Raj APPLICANT: Bahl, Mirmal Kumar APPLICANT: Banal, Ram Prakash TITLE OF INVENTION: Mint Plant Named Saksham FILE REFERENCE: 033166-002
CURRENT APPLICANT: 2000-11-27
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 14
LENGTH: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
43.8%; Score 7; DB 1
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                      APPLICANT: Khanuja, Suman Preet Singh
APPLICANT: Kumar, Sushil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Search completed: May 9, 2006, 16:43:56 Job time: 0.001 secs
                                                                                                                             Sequence 14, Application US/09721777
Patent No. PP13279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: OPT primer US-09-721-777-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7 GCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8 GCGGCAT 2
8 GCGGCAT 2
                                                                         RESULT 140
US-09-721-777-14/c
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: OPT 14 Primer - Used to develop the unique RAPD profiles of the ; OTHER INFORMATION: plant Jal Pallavi US-09-263-790-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Nirmal Kumar PATRA et al.
APPLICANT: Nirmal Kumar PATRA et al.
TITLE OF INVENTION: JAL PALLAVI, WATER LOGGING TOLERANT CYMBOPOGON WINTERIANUS
FILE REFERENCE: 2761-0120P
CURRENT APPLICATION NUMBER: US/09/263,790
CURRENT FILING DATE: 1999-03-05
NUMBER OF SEQ ID NOS: 38
SOFTWARE: Patentin version 3.0
SEQ ID NO 32
LENGTH: 10
TYPE: DNA
GRANISM: Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
        COMPUTER REDABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/093,972C
FILING DATE: 09-Jun-1998
CLASSIFICATION: <UNKnown>
PRIOR APPLICATION: <UNKnown>
PRIOR APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/757,024
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/72,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/472,527
FILING DATE: 7-June-1995
APPLICATION NUMBER: US 08/016,464
ATTORNEY/AGENT INFORMATION:
NAME: Amzel, Viviana
REGESTRATION NUMBER: EPI-00672
TELECOMINICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 43.8%; Score 7; DB 1;
Best Local Similarity 100.0%; Pred. No. 77;
Matches 7; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear

MOLECULE TYPE: DNA (genomic)

SEQUENCE DESCRIPTION: SEQ ID NO: 873:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 32, Application US/09263790 Patent No. PP12997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE: 609-409-3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: 413-254-9245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 10 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEX: <Unknown>
INFORMATION FOR SEQ ID NO: 873:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 139
US-09-263-790-32/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

ô

Gaps

. 0

0; Indels

GenCore version 5.1.8 Copyright (c) 1993 - 2006 Biocceleration Ltd.

OM nucleic - nucleic search, using sw model

May 9, 2006, 16:45:21 ; Search time 0.001 Seconds (without alignments) 245.664 Million cell updates/sec Run on:

US-09-904-968A-20-COPY 16 1 cggcggcgcatcgt 16 Title: Perfect score: Sequence:

IDENTITY NUC Gapop 10.0 , Gapext 0.5 Scoring table:

692 segs, 7677 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 693 summaries

N-Greneseg

1384

Database :

ngsdb20:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Human PKD1 gene mu	HSV RNA fragment 1	Antisense oligonuc	Human TERT G-cleav	Human TERT G-cleav	IGFBP2 oligonucleo			IGFBP2 oligonucleo		Antisense Oligonuc	Human adenosine Al	Low adenosine anti	Human adenosine Al	Human adenosine Al	Human adenosine Al	Human adenosine A1	Human TGF-beta(1)	Human TGF-beta(1)	Antisense oligonuc	Antisense oligonuc	Human adenosine A1	Human adenosine Al	Low adenosine anti	Low adenosine anti	Human adenosine Al	Human adenosine Al	Human adenosine Al	Human adenosine Al	IGFBP2 oligonucleo	IGFBP2 oligonucleo	Human adenosine Al	Human adenosine Al
SUMMARIES	ID	AAD30246	AAZ23783	AAQ81710	ADU94434	ADU94433	AAF45463	AAF45462	AAF45460	AAF45461	AAF45464	AAV47232	AAX53609	AAA33052	AAA03411	AAF19174	ABZ94868	ABD18716	AAQ75042	AAQ75043	AAV47210	AAV47231	AAX53587	AAX53608	AAA33030	AAA33051	AAA03389	AAA03410	AAF19152	AAF19173	AAF45262	AAF45261	ABZ94846	ABZ94867
	DB	-	Н	ч	н	н	H	Н	Н	П	-	П	П	7	٦	7	-	٦	-	Н	н	Н	٦	ч	٦	٦	Н	н	٦	н	-	н	1	7
	Query Match Length	16	14	15	16	16	15	15	15	15	15	14	14	14	14	14	14	14	15	15	15	15	15	15	15	15	15	15				15		
de	Query Match	100.0	77.5			71.2	68.8	68.8	68.8			67.5	ζ.	67.5	67.5	۲.			67.5	•	•	67.5				٠	٠	•	۲.	۲.	7.	67.5	•	67.5
	Score	16		11.4	11.4	٠	11	11	11	11	Н	10.8			ö	ö	ö	٠		ö	•	10.8	ö	٠	ö	ö	。	ö	。	ö	。		10.8	
	i	7	~	m	4	2	ø	7	æ	σ	10	11	12	13	14	12	16	17	18	13	20	21	22	23	24	25	56	27	28	29	30	31	32	33
	Result No.		υ		O	υ	U	υ	U	U	U									O											U	υ		

an adenoi isense oci an adenoi adenosi an adenos an adenos an adenos isense oci isense oci an adenos an adenos		adenosine cyca and adenosine cycap pol cycap pol cycap and cycap pol cycap p	Human C/EBP polynu Human C/EBP antise Human nucleic acid Human nucleic acid Human pulmonary an Human C/EBPN DNA f C/EBP-beta antisen Human C/EBP polynu Oligonucleotide SE
ппппппппппппппппппппппппппппппппппппппп	13 1 AAA33053 13 1 AAA0342 13 1 AAF19154 13 1 AAF19175 13 1 AB29466 13 1 AB29466 14 1 AB29466 14 1 AAV47211 14 1 AAV47211 14 1 AAV33009 14 1 AAA33009 14 1 AAA3009 14 1 AAA3009	Напапапапапапапапапапапапапапапапапапап	·
001 000 001 000 000 000 000 000 000 000			
u u u u u u u u u a a a a a a a a a a a	0 4 4 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

υυυ

υ

υυ

Ų

Ø
Φ
Н
•
0
ũ
<u> </u>
ğ

Human adenosine Al Low adenosine anti Low adenosine anti DNA ligand binding Human adenosine Al	Human adenosine Al Human adenosine Al	Oligonucleotide pr Oligonucleotide pr Oligonucleotide pr	Taqī adapter, stra PCR primer for dif	Ligard binding aff	r olig	Sample preparation	Human adenosine Al	Human adenosine Al	Human adenosine Al	Protein labelling	Protein labelling	Human SNP detectio	Human SNP detectio	Peptide nucleic ac	Oligonucleotide, s	SAGE tag used to i	Human dendritic ce	Metastatic breast	Metastatic Dreast Metastatic breast	Human ubiquitouely	Human ubiquitously Human ubiquitously	Human normal hepat	reast nokr gene sA Z. mays Ms45 promo	Complement #2 of H	Zinc tinger protei Zinc finder protei	Zinc finger protei	Zinc finger protei	5 14	CCBP2 detecting AS	Zinc finger target	Zinc finger target	Zinc finger target	Synthetic zinc fin			U)		- 3	Breast cancer dete	reast cancer d	breast cancer dete Hypoxia-related tu	a-related		allial n	adeno
1 AAX53568 1 AAA33011 1 AAA33128 1 AAA10347 1 AAA0347		1 ABI22486 1 ABI14198																																							ADV1841		ADU1977	AAX5	AAA3421
777777																																													
5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	52.5 52.5 52.5	52.5	52.5 52.5	52.5	52.5	52.5	52.5	52.5	52.5	52.5	52.5	52.5	52.5	52.5	52.5	0.05	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0 50.0	50.0	0.0	20.0	50.0	20.0	50.0	50.0	20.0	20.0	50.0	50.0	50.0	50.0	50.0	20.0	50.0	50.0	50.0	50.0	50.0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						00 00 4. 4.	4.	4. 4.								20 CC	ω	œ o	0 00	6 0 0	0 00	ω 0	0 00	ω (20 00	c o (co a	οω	ω α	ω	co c	ω	σο α	ο α	co c	0 00	6 0 (c o o	οω	œ c	0 00	œ (σο α	οω	œ
326 327 328 329 330 331	332		c 337 c 338		C 341		3.44.	3.45 3.45	347	348	350	c 351		c 354	٠,,	357		C 359	,	362	364	.,.	c 367	.,,	370	371	.,, .,	c 374	375 375	, (-,	378	380	381	383	(1) (1	386	C 387	,,,,	c 390	(4) (393	394	395	397	398
Oligonucleotide pr Regulatory sequenc Antisense oligonuc Antisense oligonuc Antisense oligonuc Human adenosine Al	Human adenosine Al Human adenosine Al Low adenosine anti	aden	Metastatic breast Metastatic breast	Human adenosine Al Human adenosine Al	Human adenosine Al	a) a)	Human adenosine Al	reast nork gene sa Galanin receptor q	Human CYP2D6 gene	Human SCYB14 prefe Human CALM1 gene a	Human CALM1 gene a	Human neurokinin 1	Go primer used in Human adenosine Al	Human chondromedin	Hypoxia-related tu	Hypoxia-related tu Rice oliconucleori	Human genomic DNA	Prostate cancer ge	Adapter primer oli	Antisense oligonuc	WISP PCR primer SE	Human adenosine Al	Human adenosine Al Low adenosine anti	aden	enosir enosir	ัด	Human adenosine Al Adapter 2 SEO ID N	Human skin EST 590	Adaptor 2 (complem Oligonucleotide du	Adaptor #4 used in	Lung cancer relate	9 8	Human adenosine Al	Human adenosine Al Dhace lambda unnai	chondromed	Human facial Bkin-	Adaptor oligonucle	in SNP detecti	ຄັ້	isense	ğ				
12 1 ABH99704 10 1 AAQ01757 10 1 AAV47256 10 1 AAV47336 10 1 AAV47310 10 1 AAX53687					-				н,	٦,	н	٦,	-	ч.		4 ~	н.	٦ -	н,		, , ,		·		-	н.	٦,	٦,				н,		П		. ~	⊣.	٦.	ı —		-	н,		· ·	-
ဝက်ကက်ကဲက	ທຸ່ດທຸ່	ம் ம்	ທຸ່	ທຸກ	n, n	j kņ	ro n	י וי	ru' r	υ'n	ις	n n	n ro	ı,	n n	n ro	ro r	n n	ı, n	ഗഗ	மு	n n	ហ	w r	חת	ın u	n m	ın ı	n n	ı, n	υn	ហេ	n w	L	n n	, w	ın ı	n u	ı ın	v r	n w	ın ı	n m	ı nı	
8 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9	ক' ক' ক'	4.4.	4.4	4. 4.	4. 4	. 4.	4. 4	. 4.	4.	. d.	4.	4. 4	. 4 .	4.	4. 4	4	4.4	4. 4.	4	ক ক	4.	4 4	4	ক ব	. 4.	4.4	r 4	4.	4 4	4.	4.4	4.4	4.4	4	4.4	. 4.	4.4	4.4	4	4. 4	· 4'	4.	1 4	ক	4
0 0 255 4 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		262 263						273					280					287		289	291		294								306 306		309		311				317	318		321			

ngs20.res

Yeast NORF gene SA Galanin receptor g Human maturation/a Human maturation/a Human maturation/a Human maturation/a Human motherlein Human ribosomal pr Human ribosomal pr Human sycyBl4 prefe Wancomycin-resista Human lysosomal ac Human neuropeptide Human acinc finger target Heparin-binding pr Photodamage detect IL-1 activated HUV Human adenosine Al Photodamage marker Photodamage marker	
10 1 AAF39569 10 1 AAF34659 10 1 AAF34659 10 1 AAF340167 10 1 AAF340167 10 1 AAF340464 10 1 AAF340483 10 1 AAF337745 10 1 AAF337745 10 1 AAF337745 10 1 AAF37745 10 1 AAF37746 10 1 AAF37746 10 1 AAF37746 10 1 ABF06659 10 1 ABF06659 10 1 ABF06659 10 1 ABF06659 10 1 ABF06679 10 1 AAF48135 10 1 AAF48135 10 1 AAF48135 10 1 AAF48135 10 1 AAF37124 10 1 AAF37124	000000000000000000000000000000000000000
	0 0 0000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Human endothelial Human skin EST 674 Human skin EST 674 Human skin EST 106 Human endothelial Human endothelial Human facial skin- Half-site oligonuc ON-369 for random RNA sequence discl Human pregnane X r Human pregnane X r Human skin EST 249 Human skin EST 249 Human skin EST 804 Human skin EST 604 Human skin EST 604 Human skin EST 604 Human skin EST 804 Human skin EST 804 Human facial skin- Human facial skin- Human facial skin- Human dendering USS912147 primer 1 Human denosine All Human denosine anti Low adenosine anti Human dendritic ce Human dendritic ce Human dendritic ce Human dendritic ce Human dendritic breast Metastatic breast	Human macrophage g Human adenosine Al Human adenosine Al Human colon tumour Differential displ Human adenosine Al Human adenosine Al Human adenosine Al Human cinnosine Al Human cinnosine Al Human cinnosine Al Human cinnosine Al Human changuitously Human colon epithe Human highly expre Lusa activated huma Human noinity expre
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
0 00 00 00 00 00 00 0 0 0 0 0 0 0 0 0	

ngs20.res

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAQ81710
                                                 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention relates to compositions and methods useful for the identification and detection of polycystic kidney disease (PKD1) gene mutations. The invention also relates to primers comprising a 5' region having a sequence that selectively hybridises to a PKD1 gene sequence and paint of a sequence that selectively hybridises to a PKD1 gene sequence and not to a sequence that selectively hybridises to a PKD1 gene sequence and not to a PKD1 homologue sequence. Primer pairs of the invention are useful for detecting the presence or absence of a mutation in a PKD1 polymucleotide in a sample, for identifying a subject at risk for a PKD1-associated disorder in a subject. They are useful for selectively amplifying a region of a PKD1 gene. PKD1 DNA fragments are useful detecting the presence of a mutant gene. PKD1 polymucleotide in a sample, as a probe for an amplification reaction, in hybridisation or amplification assays of biological samples to detect abnormalities of PKD1 expression and for engineering training training the presence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
NTRK1 gene polymor
NTRK1 gene polymor
Prostate cancer ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     present sequence is a PCR primer used to detect mutation in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel primer for diagnosing polycystic kidney disease-associated disorder, comprises regions having sequence that selectively hybridizes to polycystic kidney disease gene sequence.
                                                                                                                                                                                                                                 Human; PKD1 gene; autosomal dominant polycystic kidney disease; ADPKD; acquired cystic disease; transgenic animal; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
100.0%; Score 16; DB 1; Length 16;
Best Local Similarity 100.0%; Pred. No. 5.6;
Matches 16; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                         Human PKD1 gene mutation detecting nested PCR primer, 1R1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 16 BP; 1 A; 5 C; 8 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                              Phakdeekitcharoen
                                                                                                                                                                                                                                                                                                                                                                                                                   (UYJO ) UNIV JOHNS HOPKINS SCHOOL MEDICINE.
                                                               ALIGNMENTS
ADZ67948
AEA62015
AEA52329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 6; Page 100; 192pp; English.
                                                                                                                              BP.
                                                                                                                                                                                                                                                                                                                                                                            13-JUL-2000; 2000US-0218261P.
13-APR-2001; 2001US-0283691P.
                                                                                                                                                                                                                                                                                                                                                    13-JUL-2001; 2001WO-US022035
  ---
                                                                                                                             AAD30246 standard; DNA; 16
                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Watnick TJ,
 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-179805/23.
43.8
43.8
43.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human PKD1 gene
                                                                                                                                                                                                                                                                                                 WO200206529-A2
                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The
                                                                                                                                                                                17-MAY-2002
                                                                                                                                                                                                                                                                                                                            24-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                             Germino GG,
~ ~ ~
                                                                                                                 AAD30246
691
692
693
```

```
This invention describes a novel method for generating an antisense library targeted to a selected RNA transcript. The methods can be used for identifying antisense agents and for identifying target sites for antisense—mediated inhibition of a selected gene. The use of a direct library for target site selection significantly simplifies the screening process, since only very small libraries need be prepared and assayed. AAZ23783-Z23798 represent RNA fragments derived from the Herpes simplex virus genome which are used to illustrate the method of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Antisense; fibrogenic; cytokine; transforming growth factor-beta; TGF-beta; phosphorothioate; scar; wound; tumour necrosis factor-alpha; TNF-alpha; platelet derived growth factor; PDGF; fibroblast; epithelial; growth factor; FGF; EGF; interleukin; IL-1; IL-6; collagen; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Production of antisense libraries, used for identifying antisense agents and for identifying target sites for antisense-mediated inhibition of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                               Antisense; DNA library; identification; multiple cloning site; MCS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  77.5%; Score 12.4; DB 1; Length 14; 92.9%; Pred. No. 33; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 14 BP; 1 A; 9 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Antisense oligonucleotide #5 to TGF-beta mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 4; Page 56; 63pp; English.
                                                                                                                                                                                                                                                                             Herpes simplex virus unknown type.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chen Z;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В.
AAZ23783 standard; RNA; 14 BP
                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US006742.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0079792P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0107504P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UTAH ) UNIV UTAH RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAQ81710 standard; DNA; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGCGGCGGCATCG 15
                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14 eccecececerce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ruffner DE, Pierce ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-610866/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                HSV RNA fragment
                                                                                                                                                                                                                            inhibition; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             selected gene.
                                                                                                14-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                              28-MAR-1999;
                                                                                                                                                                                                                                                                                                                          WO9950457-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                            07-OCT-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-MAR-2003
06-SEP-1995
                                                 AAZ23783;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAQ81710;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
```

cecceececeirica 16

දු දු

1 CGGCGGCGCGCATCGT 16

```
ADU94433 standard; RNA; 16 BP.
     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADU94433/(ID ADU94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                            complementary to the mRNA of the fibrogenic cytokine transforming growth clactor-beta (TGF-beta) which inhibit expression of this cytokine. The oligonucleotides may contain phosphorothioate linkages to render them nuclease resistant. They are used to inhibit scar formation at a wound site by preventing the production of fibrogenic cytokines such as TGF-beta, tumour necrosis factor-alpha (TNF-alpha), platelet derived growth factor (POGF), fibroblast or epithelial growth factors (FGF or EGF) or interleukins 1 or 6 (IL-1, IL-6) which are released at high level at the wound periphery. The oligonucleotides reduce collagen content of the wound and increase tensile strength. Treated wounds are indistinguishable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Enzymatic nucleic acid molecule; gene expression; down regulation; protein-tyrosine-phosphatase-lb; PTB-1B; methionine aminopeptidase; protein-tyrosine-phosphatase; hTERT; protein kinase Calpha; PKC alpha; beta-secretase; BACE; human epidermal growth factor receptor-2; HERZ; c-erb2; neu; phospholamban; PLN; preseniln-1; ps-1; presenilin-2; ps-2; hepatitis B virus; HBV; hammerhead; HH; hairpin; NCH; inozyme; G-cleaver; amberzyme; zinzyme; DNAzyme; cancer; barrain-1; ps-1; presenilin-2; ps-2; diabetes; cobesity; candacdisease; age-related disease; diabetes; obesity; candac disease; hepatitis B infection; hepatocellular carcinoma; genetic drift; human;
                                                                                                                                                                                                                                                                                     New anti-sense oligo-nucleotide(s) to mRNA of fibrogenic cytokine - esp. transforming growth factor-beta and platelet derived growth factor, used topically to inhibit scar formation at wound sites.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                   /*tag= a
/note= "nucleotide linkages may be phosphorothioate"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from normal tissue. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .;
0
                                                                                                                                                                                                                                                                                                                                                                  Oligonucleotides (AAQ81706-15) are antisense oligonucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human TERT G-cleaver ribozyme substrate sequence #8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 15 BP; 2 A; 5 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 71.2%; Score 11.4; D
Best Local Similarity 92.3%; Pred. No. 62;
Matches 12; Conservative 0; Mismatches
                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                        Claim 5; Page 23; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADU94434 standard; RNA; 16 BP.
                                                                                                                                                                                  93US-00132259
                                                                                                                                            94WO-KR000066
                                                                                                                                                                                                          (ILYA-) IL YANG PHARM CO LTD
                                                                                                                                                                      93KR-00010883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 CGGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 cecacececar 15
                                                                                                                                                                                                                                                            WPI; 1995-051691/07.
                                       misc_difference 1
                                                                                                                                            11-JUN-1994;
                                                                                                                                                                    15-JUN-1993;
                                                                                         WO9500103-A2
                                                                                                                                                                                  06-OCT-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-FEB-2005
                                                                                                                  05-JAN-1995
 Synthetic.
                                                                                                                                                                                                                                    Chung HT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADU94434;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADU94434/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 4
24444444444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
```

```
The present invention relates to the use of enzymatic nucleic acid molecules (e.g. ribozymes) to modulate gene expression. The invention also methods for their use to down regulate or inhibit the expression of genes encoding protein-tyrosine-phosphatase-lb (PTB-1B), methionine aminopeptidase (MetAP-2), human telomerase (HTBRT), protein kinase C alpha (PKC alpha), beta-secretase (BACE), human epidermal growth factor receptor-2 (HERZ/c-erbZ/neu), phospholamban (PLM), presentlin-1 (ps-1), presentlin-2 (ps-2), and hepatitis B virus (HBV) proteins. The enzymatic nucleic acid molecules used to inhibit the expression of the said genes include hammerhead (HH), hairpin, NCH (inczyme), G-cleaver, amberzyme, zinzyme, and/or DNAzyme motifs. The methods of the invention are useful for treating cancer, in particular breast cancer, Altheimer's disease, diseases, obesity, cardiac diseases e.g. heart disease, age-related diseases, hepatitis B infections, and hepatitis and hepatocellular carcinoma. The enzymatic nucleic acid molecules can also be used as diagnostic tools to examine genetic drift and mutations within diseased calls and to detect the presence of specific RNA in a cell. The present sequence represents a substrate/targe/tequence for a ribozyme used in the examples of the present invention. Note: Some SEQ ID Nos are repeated and the present invention. Note: Some SEQ ID Nos are repeated and the present invention. Note: Some SEQ ID Nos are repeated and the present invention. Note: Some SEQ ID Nos are repeated and the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Enzymatic nucleic acid molecules able to cleave separate RNA molecules are used for treating cancer, Alzheimer's disease, hepatitis, diabetes, obesity and heart disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chowrira B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Beigelman L, Burg...
...adler D, Draper K, Chow
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 11.4; DB 1; Length 16;
Pred. No. 68;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 16 BP; 1 A; 7 C; 6 G; 0 T; 2 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Usman N, Blatt L, Beigelman L,
Matulic-Adamic J, Sweedler D, Dr
Beaudry A, Zinnen S, Lugwig J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 299; 717pp; English
                                                                                                                                                                                                                                                                                     99US-0156467P.
99US-00436430.
99US-0169100P.
                                                                                                                                                                                          99US-0151713P.
99US-00406643.
99US-0156236P.
                                                                                                                                                                                                                                                                                                                                                                                        99US-00474432.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-00476387.
2000US-00498824.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-MAR-2000; 2000US-00531025.
14-APR-2000; 2000US-0197769P.
                                                                                                                             30-AUG-2000; 2000WO-US023998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-00636385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           71.2%;
92.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-00578223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (RIBO-) RIBOZYME PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 GCGGCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity 92.3
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14 GCGCGCGCATCG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              associated with them.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-244406/25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mcswiggen J, U
Karpeisky A, M
Stinchcomb D,
WO200116312-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-MAY-2000;
                                                                                                                                                                                                                                                                                         27-SEP-1999;
08-NOV-1999;
06-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                        29-DEC-1999;
29-DEC-1999;
                                                                08-MAR-2001
                                                                                                                                                                                                                                                          27-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
```

ó

molecules (e.g. ribozymes) to enclude the correction molecules (e.g. ribozymes) to modulate gene expression. The invention also methods for their use to down regulate or inhibit the expression of genes encoding protein-tyrosine-phosphatase-lb (PTB-1B), methionine aminopeptidase (MetAP-2), human telomerase (HTBRT), protein kinase C alpha (PKC alpha), beta-secretase (BACE), human epidermal growth factor receptor-2 (HERZ/C-erbZ/neu), phospholamban (PLM), presentlin-1 (ps-1), presentlin-2 (ps-2), and hepatitis B virus (HBV) proteins. The enzymatic nucled hammerhead (HH), hairpin, NCH (inozyme), G-cleaver, amberzyme, include hammerhead (HH), hairpin, NCH (inozyme), G-cleaver, amberzyme, zinzyme, and/or DNAzyme motifs. The methods of the invention are useful for treating cancer, in particular breast cancer, Alzheimer's disease, disease, hepatitis B infections, and hepatitis and hepaticellular carcinoma. The enzymatic nucleic acid molecules can also be used as diseases, hepatitis B infections, and hepatitis and hepaticellular carcinoma. The enzymatic nucleic acid molecules can also be used as diseases, the enzymatic nucleic acid molecules can also be used as edils and to detect the presence of specific RNA in a cell. The present sequence represents a substrate/target sequence for a ribozyme used in Enzymatic nucleic acid molecule; gene expression; down regulation; protein-tyrosine-phosphatase-1b; PTB-1B; methionine aminopeptidase; MetAP-2; human telomerase; hTERT; protein kinase C alpha; PKC alpha; beta-secretase; BACE; human epidermal growth factor receptor-2; HER2; c-erb2; neu; phospholamban; PLN; presenilin-1; ps-1; presenilin-2; ps-2; hepatitis B virus; HBV; hammerhead; HH; hairpin; NCH; inozyme; G-cleaver; amberzyme; zinzyme; DNAzyme; cancer; breast cancer; Alzheimer's disease; disbetes; obesity; cardiac disease; hepatitis B infection; hepatocellular carcinoma; genetic drift; human; Enzymatic nucleic acid molecules able to cleave separate RNA molecules are used for treating cancer, Alzheimer's disease, hepatitis, diabetes, obesity and heart disease. ä The present invention relates to the use of enzymatic nucleic acid Chowrira Usman N, Blatt L, Beigelman L, Burgin A; Matulic-Adamic J, Sweedler D, Draper K, Ch Beaudry A, Zinnen S, Lugwig J, Sproat BS; Human TERT G-cleaver ribozyme substrate sequence #7. Example 1; Page 299; 717pp; English. 99US-0151713P.
99US-0164643.
99US-0156236P.
99US-0156467P.
99US-00436430.
99US-00434432.
99US-0173612P.
99US-00476387. 30-AUG-2000; 2000WO-US023998 2000US-00636385 (RIBO-) RIBOZYME PHARM INC. (first entry) WPI; 2001-244406/25. WO200116312-A2. Mcswiggen J, U Karpeisky A, N Stinchcomb D, 30-DEC-1999; 04-FEB-2000; 20-MAR-2000; Homo sapiens. 31-AUG-1999; 27-SEP-1999; 27-SEP-1999; 27-SEP-1999; 08-NOV-1999; 06-DEC-1999; 29-DEC-1999; 29-DEC-1999; 14-APR-2000; 09-AUG-2000; 10-FEB-2005 08-MAR-2001 ADU94433;

ö the examples of the present invention. Note: Some SEQ ID Nos are repeated more than once in the specification, but these have different sequences associated with them. Gaps ö DB 1; Length 16; Indels 6 G; 0 T; 1 U; 0 Other; 1; 71.2%; Score 11.4; D 92.3%; Pred. No. 68; ive 0; Mismatches Sequence 16 BP; 1 A; 8 C; 3 GCGGGCGGCATCG 15 16 GCGCGCGCATCG 4 12; Conservative Best Local Similarity Query Match Matches 883333 Š 셤

AAF45463 standard; DNA; 15 BP AAF45463; RESULT 6 AAF45463/

IGFBP2 oligonucleotide #302 30-MAR-2001 (first entry)

Antisense therapy, antiproliferative; antinflammatory, antipsoriatic; cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid; skin disorder; Insulin-like Growth Factor I receptor; IGF-1; pityriasis; IGF binding procein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris; growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba; keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease; hyperneovascular condition; hyperplasia; kidney disease; neovascular condition; hyperplasia; kidney disease;

21-JUN-2000; 2000WO-AU000693. WO200078341-A1. Homo sapiens. 28-DEC-2000.

MURD-) MURDOCH CHILDRENS RES INST.

99US-0140345P.

21-JUN-1999;

SR; Edmondson Wraight CJ, Werther GA,

WPI; 2001-041421/05.

Ameliorating the effects of a disorder, e.g. psoriasis, by administering UV (ultra-violet) treatment (optional) and an antisense nucleic acid that inhibits or reduces growth factor mediated cell proliferation and/or inflammation.

Example 6; Page 36; 201pp; English.

The present invention relates to a method for ameliorating the effects of skin disorders. The method comprises contacting the skin with an antisense oligonucleotide, (for Inaulin-like Growth Factor [IGRP-1] receptor, IGF binding protein [IGRBP-2] or IGRBP3), which is capable of inhibiting or reducing growth factor mediated cell proliferation, if inflammation and/or other disorders. The present sequence is an oligonucleotide which can be used to design the antisense oligonucleotides of the present invention (see AAF45151 and AAF45153-CC fathowsis, pityriasis, ruba, pilaris, seborthoea, keloids, keratosis, inchipusis, pityriasis, ruba, pilaris, esborthoea, keloids, keratosis, chethyosis, pityriasis, varts, benign growths, cancers of the skin, a neoplasias, scleroderma, warts, benign growths, cancers of the skin, a brain or skin, growth factor-mediated malignancies, other sclerotic disease, kidney disease, hyperproliferation of the inside of blood customers.

S

ð ద

ö

Gaps

ö

Indels

ö

Mismatches

ö

11; Conservative

```
Matches
                                             ઠે
                                                                                                                                                                                                                           셤
                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ameliorating the effects of a disorder, e.g. psoriasis, by administering V (ultra-violet) treatment (optional) and an antisense nucleic acid that inhibits or reduces growth factor mediated cell proliferation and/or inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                        cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid; skin disorder; Insulin-like Growth Factor 1 receptor; IGF-1; pityriasis; IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris; growth factor mediated cell proliferation; ichthyosis; serborrhees; ruba; keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease; hyperneovascular condition; hyperplasia; kidney disease; neovascular condition of the retina; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   skin disorders. The method comprises contacting the skin with an antisense oligonuclectide, (for Insulin-like Growth Factor [IGF]-1 receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of inhibiting or reducing growth factor mediated cell proliferation, inflammation and/or other disorders. The present sequence is an oligonuclectide which can be used to design the antisense oligonuclectides of the present invention (see AAF45131 and AAF45153-F45161). The method is useful for ameliorating the effects of psoriasis, ichthyosis, ruba, pilaris, serbornhoer, keloids, keratosis, neoplasis, scleroderma, warts, benign growths, cancers of the skin, a hyperneovascular condition such as a neovascular condition of the retina,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       present invention relates to a method for ameliorating the effects of
                                                                                                                                                                                                                                                                                                                                                                                                                     Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic;
                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               brain or skin, growth factor-mediated malignancies, other sclerotic disease, kidney disease, hyperproliferation of the inside of blood
                                                                                  ;
0
                                           Length 15;
                                                                                Indels
Sequence 15 BP; 0 A; 9 C; 6 G; 0 T; 0 U; 0 Other;
                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 15 BP; 0 A; 9 C; 6 G; 0 T; 0 U; 0 Other;
                                     68.8%; Score 11; DB 1;
100.0%; Pred. No. 76;
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wraight CJ, Werther GA, Edmondson SR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MURD-) MURDOCH CHILDRENS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 6; Page 36; 201pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      vessels or any other hyperplasia
                                                                                                                                                                                                                                                          AAF45462 standard; DNA; 15 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-JUN-2000; 2000WO-AU000693.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0140345P.
                                                                                                                                                                                                                                                                                                                                                                              IGFBP2 oligonucleotide #301.
                                                                                                                                                                                                                                                                                                                                       30-MAR-2001 (first entry)
                               Query Match
Best Local Similarity 100.
Matches 11, Conservative
                                                                                                                   1 CGGCGGCCGC 11
                                                                                                                                                         ~
                                                                                                                                                           2002000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-041421/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200078341-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-DEC-2000
                                                                                                                                                                                                                                                                                                 AAF45462;
                                                                                                                                                                                                                                       AAF45462/c
```

8XCCCCCCCCCCCCCCX8X44444X4X4X4X4X4X6XX8XX8XX8XX8XX8XX8X8

DB 1; Length 15; 76;

68.8%; Score 11; 100.0%; Pred. No.

Best Local Similarity

Query Match

```
The present invention relates to a method for ameliorating the effects of skin disorders. The method comprises contacting the skin with an antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1 receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of inhibiting or reducing growth factor mediated cell proliferation, coligonucleotide which can be used to design the antisense oligonucleotide which can be used to design the antisense oligonucleotides of the present invention (see AAF4151 and AAF45153-F45161). The method is useful for ameliorating the effects of psoriasis, coligonucleotides, ruba, pilaris, serborrhoea, keloids, keratosis, neoplasias, seleroderam, warts, benign growths, cancers of the skin, a hyperneovascular condition such as a neovascular condition of the retina, brain or skin, growth factor-mediated malignancies, other sclerotic disease, kidney disease, hyperproliferation of the inside of blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Antisense therapy, antiproliferative, antiinflammatory, antipsoriatic, cytostatic, dermatological; cardiant; virucide, ophthalmological; keloid, skin disorder; lisulin-like Growth Factor I receptor; IGF-1; pityliasis; IGF binding procein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris; growth factor mediated cell proliferation; ichthyosis; serborinoea; ruba; keratosis; neoplasia; sclaroderma; wart; skin cancer; sclerotic disease; hypermeovascular condition; hyperplasia; kidney disease; neobascular condition of the retina; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ameliorating the effects of a disorder, e.g. psoriasis, by administering UV (ultra-violet) treatment (optional) and an antisense nucleic acid that inhibits or reduces growth factor mediated cell proliferation and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 11; DB 1; Length 15;
Pred. No. 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 15 BP; 0 A; 8 C; 5 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Edmondson SR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MURD-) MURDOCH CHILDRENS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 6; Page 36; 201pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68.8%; Scc.
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       vessels or any other hyperplasia
                                                                                                                                                                                                                     BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-JUN-2000; 2000WO-AU000693.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0140345P.
                                                                                                                                                                                                                                                                                                                                                                                                             IGFBP2 oligonucleotide #299
                                                                                                                                                                                                                  AAF45460 standard; DNA; 15
                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Werther GA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100.
11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ז
1 CGGCGGCGGC
                                                           2992999999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CGGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-041421/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200078341-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo gapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3
                                                                                                                                                                                                                                                                                                                                                  30-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-DEC-2000.
                                                                                                                                                                                                                                                                                    AAF45460;
                                                           13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wraight
                                                                                                                                                                                        AAF45460/c
                                                                                                                                                       RESULT
```

Wed May 10 10:49:51 2006

30-MAR-2001

AAF45461;

AAF45461/c

셤

```
The present invention relates to a method for ameliorating the effects of akin disorders. The method comprises contacting the skin with an antisense Oligonucleotide, (for Insulin-like Growth Factor [IGF]-1 receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of inhibiting or reducing growth factor mediated cell proliferation, inflammation and/or other disorders. The present esquence is an oligonucleotide which can be used to design the antisense oligonucleotides of the present invention (see AAF45151 and AAF45153-F45161). The method is useful for ameliorating the effects of psoriasis, ichthyosis, pityriasis, bilaris, serborrhoea, keloids, keratosis, neoplasias, scleroderma, warts, benign growths, cancers of the skin, a hyperneovascular condition such as a neovascular condition of the retina, brain or skin, growth factor-mediated malignancies, other sclerotic disease, kidney disease, hyperproliferation of the inside of blood
                                                                                                                                                                                                                                Antisense therapy, antiproliferative, antinflammatory, antipsoriatic, cytostatic, dermatological, cardiant, virucide, ophthalmological, keloid, skin disorder, Insulin-like Growth Factor I receptor; IGF-1, pityriasis, IGF binding protein; IGFBP-2, IGFBP3, inflammation, psoriasis; pilaris, growth factor mediated cell proliferation; ichthyosis, serborrhoea, ruba, keratosis, neoplasia, scleroderma, wart, skin cancer; sclerotic disease, hyperneovascular condition, hyperplasia, kidney disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ameliorating the effects of a disorder, e.g. psoriasis, by administering UV (ultra-violet) treatment (optional) and an antisense nucleic acid that inhibits or reduces growth factor mediated cell proliferation and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68.8%; Score 11; DB 1; Length 15; 100.0%; Pred. No. 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 15 BP; 0 A; 8 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%; Preq. n...
                                                                                                                                                                                                                                                                                                                                                                                                                        neovascular condition of the retina; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wraight CJ, Werther GA, Edmondson SR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (MURD-) MURDOCH CHILDRENS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 6; Page 36; 201pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vessels or any other hyperplasia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV47232 standard; DNA; 14 BP.
                              BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUN-2000; 2000WO-AU000693.
                                                                                                                                                                                    IGFBP2 oligonucleotide #303.
                              AAF45464 standard; DNA; 15
                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CGGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-041421/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200078341-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-JUN-1999;
                                                                                                                                30-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-DEC-2000.
                                                                            AAF45464;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAV47232;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
  AAF45464/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
AAV47232
                              ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                Antisense therapy, antiproliferative, antiinflammatory, antipsoriatic, cytostatic, dermatological, cardiant, virucide, ophthalmological, keloid, skin disorder, Insulin-like Growth Factor I receptor; IfFP-1; pityriasis; IGF binding protein, IGFBP-2; IGFBP3, inflammation, psoriasis; pilaris; growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba; Restools, neoplasia; soleroderma; wart, skin cancer; sclerotic disease; hyperneovascular condition; hyperplasia; kidney disease; neoblation of the retina; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ameliorating the effects of a disorder, e.g. psoriasis, by administering UV (ultra-violet) treatment (optional) and an antisense nucleic acid that inhibits or reduces growth factor mediated cell proliferation and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oligonucleotides of the present invention (see AAF45151 and AAF45153-F45161). The method is useful for ameliorating the effects of psoriasis, ichthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis, neoplasias, selecoderma, warts, benign growths, cancers of the skin, a hyperneovascular condition such as a neovascular condition of the retina, brain or skin, growth factor-mediated malignancies, other sclerotic disease, kidney disease, hyperproliferation of the inside of blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           present invention relates to a method for ameliorating the effects of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 skin disorders. The method comprises contacting the skin with an antisense oligonucleotide, (for Insulin-like Growth Factor [IGF]-1 receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of inhibiting or reducing growth factor mediated cell proliferation, inflammation and/or other disorders. The present sequence is an oligonucleotide which can be used to design the antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68.8%; Score 11; DB 1; Length 15; 100.0%; Pred. No. 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 15 BP; 0 A; 9 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Pred. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Edmondson SR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 6; Page 36; 201pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MURD-) MURDOCH CHILDRENS RES INST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vessels or any other hyperplasia
                                                                                                                              AAF45461 standard; DNA; 15 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-JUN-2000; 2000WO-AU000693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0140345P
                                                                                                                                                                                                                                                                                       IGFBP2 oligonucleotide #300
                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Werther GA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CGGCGGGCGGC 11
15 CGGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-041421/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200078341-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-JUN-1999;
```

Wraight CJ,

ô

Gaps

ö

0; Indels

Query Match

Matches

ò

RESULT 10

Human adenosine Al receptor antisense oligonucleotide fragment.

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine Al receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oligonucleotides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inflammation in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Treating respiratory disease with antisense sequences directed against adenosine or bradyknin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                  Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                     /*tag= a
/note= "contains phosphorothioate internucleotide
                                               Antisense oligonucleotide 732, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1; Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 14 BP; 2 A; 2 C; 9 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match 67.5%; Score 10.8; D
Local Similarity 85.7%; Pred. No. 77;
es 12; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX53609 standard; DNA; 14 BP.
                                                                                                                                                                                                                                                                                                                                                                             97WO-US022017.
                                                                                                                                                                                                                                                                                                                                                                                                             96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGCGGCGGCATCG 15
               10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGAGGGCGCCATGG 14
                                                                                                                                                                                                                                                                          linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-322464/28.
                                                                                                                                                                                                       Key
modified_base
                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                           26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                           26-NOV-1996;
                                                                                                                                                                                                                                                                                                        WO9823294-A1
                                                                                                                                                                                                                                                                                                                                          04-JUN-1998
                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAX53609;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX53609
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2XX
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271)
directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, gene initiation
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
end and the juxta-section between coding and non-coding regions and all
codonis of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
(specifically AAX5180-271) can be used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
cassociated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
acute asthma, allergies, asthma, impeded respiration,
cate asthma, allergies, asthma, impeded respiration,
cate asthma, allergies, asthma, impeded respiration,
disease (COPD), and cancers such as leucenic obstructive pulmonary
disease (COPD), and cancers such as leucenic cancer,
colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases, as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized
                                                                                                            acute asthma, allergy; asthma; impeded reggiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                     Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 10.8; DB 1; Length 14;
Pred. No. 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 14 BP; 2 A; 2 C; 9 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .;
?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              °;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP.
                                                                                                                                                                                                                                                                                                                                                                                             98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-0059160P
98US-00093972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA33052 standard; DNA; 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 deadecececares 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 85.7
1es 12; Conservative
                                                                                                                                                                                                                                     prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vasoconstriction.
                                                                                                                                                                                                                                                                                                               WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                             .7-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                    17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                    25-MAR-1999.
                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAA33052;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA33052
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss. Human, adenosine receptor, low adenosine antisense oligonucleotide, phosphorothioate, impaired respiration; inflammation; allergy; allergic disease, bronchoconstriction; inhibitor; antiinflammatory; New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or Low adenosine antisense oligonucleotide SEQ ID NO:741. Claim 18; Page 359; 1343pp; English. (UYEC-) UNIV EAST CAROLINA. 28-JUL-2000 (first entry) WPI; 2000-205971/18. WO200009525-A2 Homo sapiens. 03-AUG-1999; 03-AUG-1998; 24-FEB-2000 %XCCCCCCCCCCCCCCCCCCCCCCX

99WO-US017712 98US-0095212P

The present invention describes a new composition composition of composition of composition of composition of composition of composition of composition. The ON can have antidifammatory, antialergie, and/or inflammation. The ON can have antidifammatory, antialergie, and/or antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA33312 represent the nucleotide sequences given in the sequence listing from the present convention, which correspond to SEQ ID No:1 to 2815, and then the last 185 sequences are also called SEQ ID No:1 to 2815, and then the last from the previously maned sequences. SEQ ID No:1 to 2815. present invention describes a new composition comprising an antisense from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to AAA33929) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence up with their corresponding SEQ ID NO: sequences given in the sequence

Sequence 14 BP; 2 A; 2 C; 9 G; 1 T; 0 U; 0 Other;

ö Query Match

67.5%; Score 10.8; DB 1; Length 14;
Best Local Similarity 85.7%; Pred. No. 77;
Matches 12; Conservative 0; Mismatches 2; Indels 2 GGCGGCGGCATCG 15 GGAGGGCGCCATGG 14

ð

ö

Gaps

Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine As receptor; adenosine As receptor; adenosine As receptor; phosphorothioate; cardioqualmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; entralergic; anti-inflammatory; anti-hypoxic; chronic obstructive pulmonary disease; ss. Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:695. AAA03411 standard; DNA; 14 BP 99WO-US012775. (first entry) 19-MAY-2000 sapiens. W09963938-A2 08-JUN-1999; 16-DEC-1999, Synthetic. AAA03411; Homo AAA0341

Novel composition for treating or preventing e.g. cardiopulmonary and (EPIG-) EPIGENESIS PHARM INC. WPI; 2000-116433/10. Hill JL; renal injury Nyce JW,

98US-00093972. 98US-0088657P.

98US-0088501P.

08-JUN-1998; 09-JUN-1998; 09-JUN-1998; Claim 17; Page 34; 252pp; English.

The present invention describes a pharmaceutical composition, comprising at least one agent (1) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulnonary and/or renal damage and/or failure.

(1) is an adenosine Aza receptor agonist (1a), or an oligonuclectide genes or corresponding RNA, to genomic (A), that is antisense to target composition or corresponding RNA, to genomic (A), that is antisense to target composition or corresponding the adenosine A1, A2a, A2b or A3 receptors, or can as an at cleast no agonist activity or A2a antagonist activity (or at least no agonist activity or A2a antagonist activity (or at and (1b), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, esg. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02719, AAA02721 and AAA02723 to AAA03715 represent specifically claimed phosphorothioate antisense oligonucleotides for use in the composition of the present invention. AAA02718, AAA02720, AAA02712 and AAA03716 to AAA03720 represent other phosphorothioate oligonucleotides used in the exemplification of the present invention

Sequence 14 BP; 2 A; 2 C; 9 G; 1 T; 0 U; 0 Other;

Length 14; DB 1; Score 10.8; I Pred. No. 77; 67.5%; Query Match Best Local Similarity

```
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  receptors, CNS and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and mailgnancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or
                                                                                                                                                                                                                                                                                                                                                                                            human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CMS) and peripheral nervous and non-nervous system
         Gaps
                                                                                                                                                                                                                                                                                                                                                                            adenosine antisense oligonucleotide; phosphorothioate; allergy; an; airway disorder; bronchoconstriction; lung inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes low adenosine (A) content antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              condition selected from pulmonary vasoconstriction, inflammation
      ö
                                                                                                                                                                                                                                                                                                                                Human adenosine Al receptor polynucleotide fragment #741.
      Indels
    2;
    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 14; Page 117; 1592pp; English.
    ;
0
                                                                                                                                                                                                AAF19174 standard; DNA; 14 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0127958P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-MAR-2000; 2000WO-US008020
                                           2 GGCGGCCGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EAST CAROLINA.
J W.
                                                                                    GGAGGCGCCATGG 14
                                                                                                                                                                                                                                                                                       14-MAR-2001 (first entry)
    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200062736-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYEC-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (NYCE/) NYCE
  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cancer; ss.
                                                                                                                                                                                                                                           AAF19174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nyce JW;
Matches
                                                                                                                                                                              AAF1917
                                           ઠે
                                                                                       요
```

```
Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; antisense; lung dysfunction; nasal airway dysfunction;
antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic;
antisathmatic; hypotensive; immunosuppressive; cycostactic; gene therapy;
antisense gene therapy; respiratory; lung; adenosine sensitivity;
adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding regions, 5 or 3 end genemic flanking regions, 5 and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dystunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiaschmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels
allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF18543 represent human polymucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aguilar D;
                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                      DB 1; Length 14;
                                                                                                                                                                                                                                              2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human adenosine Al receptor antisense fragment no.731.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Katz E, Pabalan J,
                                                                                                                                                              Sequence 14 BP; 2 A; 2 C; 9 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lung inflammation, respiratory disease, ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; SEQ ID NO 10110; 872pp; English.
                                                                                                                                                                                                   Score 10.8; I
Pred. No. 77;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                               BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                      67.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                               2 GGCGGCGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                            ABZ94868 standard; DNA; 14
                                                                                                                                                                                                                                                                                                                         1 GGAGGGCGCCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                              12; Conservative
                                                                                                                          the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2003-229219/22.
                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-0CT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ubiquinone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABZ94868;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce JW,
                                                                                                                                                                                                                                              Matches
  888888888
                                                                                                                                                                                                                                                                                                                       요
                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
```

ö This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The olygonucleotides are derived from a gene encoding or resplating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers (b) the oligonucleotides (c) instructions for adding a carrier and for use of the kit. The composition Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; bronchitis; pulmonary transplantation rejection; ds. of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung surfactant and allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO Gaps Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted to nucleic acids associated with lung airway or lung dysfunction, and ü ö Aguilar Score 10.8; DB 1; Length 14; Pred. No. 77; Indels Human adenosine Al receptor oligonucleotide fragment 731. Pabalan J, 5, Sequence 14 BP; 2 A; 2 C; 9 G; 1 T; 0 U; 0 Other; ftp.wipo.int/pub/published_pct_sequences 0; Mismatches Claim 15; SEQ ID NO 10110; 763pp; English. Katz E, Sandrasagra A, Ka , Shahabuddin S; ABD18716 standard; DNA; 14 BP. 67.5%; 85.7%; 23-APR-2002; 2002WO-US013143 24-APR-2001; 2001US-0286036P (EPIG-) EPIGENESIS PHARM INC oligonucleotide containing 2 GGCGGGCGCATCG 15 1 GGAGGGGGCATGG 14 (first entry) Local Similarity 85.7 1es 12, Conservative bronchodilating agent WPI; 2003-093058/08. Tang L, WO200285309-A2 Homo sapiens. ij 29-JUL-2004 31-OCT-2002 Nyce JW, I Miller S, ABD18716; Query Match Matches RESULT 17 셤 888888888888 ò

analgesic, hypotensive, immunosuppressive and cytostatic activity, is beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to creduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or conditions such as pulmonary vasoconstriction, cinflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic thinitis, pulmonary confirmation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system ceg., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it ö AAQ75042 is a human TGF-beta(1) (hTGFb1) antisense oligomer, which inhibits the expression of TGFb1. When administered to a site of lesion formation the antisense oligomer helps prevent restenosis, after cardiovascular angioplasty. (Updated on 25-MAR-2003 to correct PN field.) Gaps Inhibiting cellular activity associated with vascular lesions - with anti:sense oligomers against cyclin or cyclin dependent kinase genes, partic. for preventing restenosis after cardiovascular angioplasty. Human transforming growth factor beta 1; hTGFb1; antisense therapy; restenosis prevention; cardiovascular angioplasty; ss. antiasthmatic, .; 0 DB 1; Length 14; 2; Indels invention has antiallergic, antiinflammatory, Sequence 14 BP; 2 A; 2 C; 9 G; 1 T; 0 U; 0 Other; Score 10.8; DB Pred. No. 77; 0; Mismatches Human TGF-beta(1) antisense oligomer. (STRD) UNIV LELAND STANFORD JUNIOR. Disclosure; Page 8; 77pp; English. 0; ВР. 67.5%; 94WO-US005566. 93US-00063980. AAQ75042 standard; DNA; 15 GGCGGGCGCATCG 15 1 gaaggcccccarge 14 (first entry) Local Similarity 85.7 nes 12; Conservative (revised) WPI; 1995-006785/01. WO9426888-A1 18-MAY-1994; 19-MAY-1993; 20-AUG-1993; 24-NOV-1994. 25-MAR-2003 18-AUG-1995 Synthetic. AAQ75042; ~ Query Match Dzau VJ; Matches RESULT 18 AAQ75042 ò 셤

Wed May 10 10:49:51 2006

```
Antisense oligonucleotide 710, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                       WPI; 1998-322464/28.
                                                                                                Key
modified_base
                                                                                                                                                                                            26-NOV-1997;
                                                                              Homo sapiens
                                                                                                                                                        WO9823294-A1
                                                                                                                                                                                                                26-NOV-1996;
                                                                                                                                                                           04-JUN-1998.
                                                                    Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV47231;
                                                                                                                                                                                                                                                     Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV4723
   XXXXX8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAQ75043 and AAQ75044 are a pair of primers for the PCR amplification of human TGF-beta(1) (hTGFb1). These were used in the development of an antisense oligomer which inhibits the expression of TGFb1. When administered to a site of lesion formation the oligomer helps prevent restenosis, after cardiovascular angioplasty. (Updated on 25-MAR-2003 to correct PN field.)
                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                     Inhibiting cellular activity associated with vascular lesions - with anti:sense oligomers against cyclin or cyclin dependent kinase genes, partic. for preventing restenosis after cardiovascular angioplasty.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                           Human transforming growth factor beta 1; hTGFb1; antisense therapy; restenosis prevention; cardiovascular angioplasty; PCR primer; ss.
                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                  DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 15;
                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
Sequence 15 BP; 2 A; 2 C; 10 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 15 BP; 1 A; 10 C; 2 G; 2 T; 0 U; 0 Other;
                                      5;
                 67.5%; Score 10.8; D
85.7%; Pred. No. 85; ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 10.8; | Pred. No. 85;
                                                                                                                                                                                                                                                                                                                                             (STRD ) UNIV LELAND STANFORD JUNIOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 8; 77pp; English.
                                                                                                                        AAQ75043 standard; DNA; 15 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV47210 standard; DNA; 15 BP.
                                                                                                                                                                                        Human TGF-beta(1) PCR primer.
                                                                                                                                                                                                                                                                                                94WO-US005566
                                                                                                                                                                                                                                                                                                                   93US-00063980
                                                                                                                                                                                                                                                                                                                             93US-00110294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 85.7%;
Matches 12; Conservative
                                                       2 GGCGGGCGCCATCG 15
                                                                          1 GGAGGGCGCCATGG 14
                                                                                                                                                              (revised)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGCGGGCGCCATCG 15
              Query Match
Best Local Similarity 85.77
Matches 12, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15 GGAGGCGGCATGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                    WPI; 1995-006785/01.
                                                                                                                                                                                                                                                          WO9426888-A1.
                                                                                                                                                                                                                                                                                                18-MAY-1994;
                                                                                                                                                                                                                                                                                                                   19-MAY-1993;
                                                                                                                                                                                                                                                                                                                            20-AUG-1993;
                                                                                                                                                             25-MAR-2003
15-AUG-1995
                                                                                                                                                                                                                                                                             24-NOV-1994.
                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                           AAQ75043;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV47210;
                                                                                                                                                                                                                                                                                                                                                                  Dzau VJ;
                                                                                                     RESULT 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 20
                                                                                                               AAQ75043,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV47210
S
                                                       ઠે
                                                                         셤
                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

```
Sequences AAV46501-V4746 are anti-sense oligonuclectides that target the human adenosine A1 receptor, the design of which required the secondary contract this targets mRNA. The adenosine receptor mRNA secondary structure of this targets mRNA. The adenosine receptor mRNA secondary carricture was both analysed and used to construct antisense containing a phosphorothicate backbone. Once the carrisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-containing either a junction between the intron and exon, or where they contained the initiation colon. The receptors that have 7-contained the initiation colon and celebrate and to treat or prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                        /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antisense oligonucleotide 731, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 15 BP; 2 A; 2 C; 9 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 10.8; DE Pred. No. 85; 0; Mismatches
                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 12; Page 8-24; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96US-00757024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 85.73,
The 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV47231 standard; DNA; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-NOV-1998 (first entry)
```

ö

```
.;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the Muman adenosine AI receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oligonuclectides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonuclectides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonuclectides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nflammation in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Treating respiratory disease with antisense sequences directed against adenosine or bradyknin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
          Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antisense oligonucleotide; multiple target; antisense treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 10.8; DB 1; Length 15; Pred. No. 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 15 BP; 2 A; 3 C; 9 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           allergy, emphysema and cystic fibrosis
                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 12; Page 8-24; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAX53587 standard; DNA; 15 BP.
                                                                                                                                                                                                                                                                                                                                  96US-00757024.
                                                                                                                                                                                                                                                                                                    97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67.5%;
                                                                                                                                                                                                                                                                                                                                                                     EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGAGGGCGGCATGG 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                  Key
modified_base
                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                     UYEC-) UNIV
                                                                                                                                                                                                                                  WO9823294-A1
                                                                                                                                                                                                                                                                                                    26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                     26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUL-1999
                                                                                                                                                                                                                                                                   04-JUN-1998
                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAX53587;
                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAX53587
#X#X#X#X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, gene initiation
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
end and the juxta-section between coding and non-coding regions and all
segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
for sequences AAX55272-74. These multiple target oligonucleotides
conditions or mixtures. The antisease and conditions are those
diseases and conditions. Typical diseases and conditions are those
cassociated with impaired respiration and inflammation, including lung
diseases, pulmonary vascoconstriction, inflammation, respiratory
diseases, pulmonary vascoconstriction, implements the pulmonary
diseases (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases, as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, a well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                           pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor antisense oligonucleotide fragment.
              pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67.5%; Score 10.8; DB 1; Length 15; 85.7%; Pred. No. 85; ive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 15 BP; 2 A; 2 C; 9 G; 2 T; 0 U; 0 Other;
impaired respiration; inflammation; lung disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 38; 120pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                       98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                            97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                         (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX53608 standard; DNA; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 GGGGGGGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 85.7
Matches 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGAGGGGGCATGG
                                                                                                                                                              prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vasoconstriction
                                                                                                                                                                                                                                                                                                                         17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                               17-SEP-1997;
                                                                                                                                                                                                                                          WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                 09-JUN-1998;
                                                                                                                                                                                                                                                                                 25-MAR-1999.
                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX53608;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX53608
SXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; lachaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension, chronic obstructive pulmonary disease; COPD;

Low adenosine antisense oligonucleotide SEQ ID NO:719.

cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.

99WO-US017712.

03-AUG-1999; 03-AUG-1998;

24-FEB-2000.

WO200009525-A2 Homo sapiens.

98US-0095212P

(UYEC-) UNIV EAST CAROLINA.

WPI; 2000-205971/18.

Nyce JW;

```
The specification describes antisense oligonuclectides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and
con-coding regions of RNAs corresponding to target genes, gene initiation
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
conditions or mixtures. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
acute asthma, allergies, asthma, impeded respiration, respiratory
distress syndrome, pain, cystic fibrosis, pulmonary hypertension,
culmonary vasoconstriction, emphysema, chronic obstructive pulmonary
colon cancer, breast cancers such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, paincratic cancer,
colon cancer, breast cancer, mixtures, medators
colon cancer, breast cancer, mixtures, pain, hyperic metastases, as
colon sall types of cancers which may metastasize or have metastasized
                Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary bypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New antisense oligonucleotides used in treatment of, e.g. pulmonary vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67.5%; Score 10.8; DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15 BP; 2 A; 3 C; 9 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                          98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 85.7 es 12; Conservative
                                                                                                                                                                                                                             prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                        17-SEP-1998;
                                                                                                                                                                                                                                                                                                                 WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                              25-MAR-1999.
                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New
ò
```

New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or

Claim 18; Page 356; 1343pp; English.

cancers.

```
ö
Gaps
.
0
                          1 GGAGGGCGCCATGG 14
```

```
The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets conclete acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antifilamentory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of disease associated with inflammation, inpaired airways, including lung disease and disease whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. inchemic conditions, pulmonary vasconstriction, allergies, asthma, cimpeded respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive cultinomary disease (COPD), and cancers such as leukamias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the concensuration and inflammation. AAA33313 to AAA35312 represent the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA33313 to AAA35312 represent the invention, which correspond to SEQ ID NO:1 to 1815, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 1815, and then the last to repetences are also called SEQ ID NO:1 to 1815, but the sequence of from the previously named sequences. SEQ ID NO:1 to 185, but the sequence of from the previously named sequences. SEQ ID NO:1 to 185, but the sequence of the previous in the sequence given in the disclosure of the present invention. N.B. Sequences given in the disclosure of the present invention. N.B. Sequences given in the sequence given in the sequence given in the sequence given in the sequences given 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 15 BP; 2 A; 2 C; 9 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 10.8; DB Pred. No. 85; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 85,,,,
Best Local 2; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGAGGGGGCATGG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Listing
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
```

RESULT 25

AAA33030 standard; DNA; 15 BP.

RESULT 24

AAA33030

28-JUL-2000 (first entry)

AAA33030;

```
The present invention describes a new composition composition colligonucleotide (ON) with low adenosine (up to 154), which targets nucleic acids involved in bronchoconstriction, allergies, and/or confident and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary vapertension, emphysema, chronic obstructive currents of the carcinomas, and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including carcinomas, and cancers which may metastasise to the lungs, including carcinomas, and cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the calcase of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent content of invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 185, but the sequence differ from the previously named sequences. SEQ ID NO:1 to 185, but the sequence differ from the previously named sequences of the present invention. N. B. Sequences given in the disclosure of the present invention. On the match is a proper or analogous present invention of the match is a proper or analogous properties of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes a new composition comprising an antisense
                                                                                                                                                                                                              Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                       Low adenosine antisense oligonucleotide SEQ ID NO:740.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 15 BP; 2 A; 3 C; 9 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 18; Page 359; 1343pp; English.
                         AAA33051 standard; DNA; 15 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYEC-) UNIV EAST CAROLINA.
                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-AUG-1998;
                                                                                                                       28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-FEB-2000
                                                                       AAA33051;
AAA33051
```

```
The present invention describes a pharmaceutical composition, comprising at least one agent (1) that prevents, alleviates and/or inhibits at least one agent (1) that prevents, alleviates and/or inhibits andenosine—mediated cardiopulmonary and/or renal damage and/or failure.

(1) is an adenosine A2a receptor agonist (1a), or an oligomucleotide containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic (Alaking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a or A3 receptors, and has A1, A2b or A3 agonist activity or A2a anteagonist activity (or at least no agonist activity or A2a anteagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and (1b), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or renal damage or failure receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischemia, toxin release and/or daministration of darges or inaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndministration of surgesting adult) respiratory distress syndministration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAAO2719, AAAO2712 and AAAO3712 and AAAO3712 and AAAO3712 and AAAO3713 represent other origonucleotides for use in the composition of the present invention. AAAO2718, AAAO2718, AAAO2712, AAAO2712, AAAO3716 to AAAO3719 represent other origonucleotides used in the exemplification of the
                                                                                                                                                                                                                                                                                                      Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine A3 receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                   Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:673.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 17; Page 34; 252pp; English.
                                                                                                                                             ВЪ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0088501P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0088657P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                           AAA03389 standard; DNA; 15
GGCGGCGCCATCG 15
                          GGAGGGGGGCATGG 14
                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW, Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-JUN-1998;
                                                                                                                                                                                                                            19-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                     AAA03389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                  RESULT 26
                                                                                                                                                                 ð
                                     g
```

Gaps

.; 0

67.5%; Score 10.8; DB 1; Length 15; ilarity 85.7%; Pred. No. 85; Conservative 0; Mismatches 2; Indels

Query Match Best Local Similarity Matches 12; Conservat

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits are least one agent (I) that prevents, alleviates and/or inhibits accession and adenosine Aza receptor agonist (Ia), or an oligomucleotide (Ib), containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' ones or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine Al, Aza, Azb or A3 receptors, and has A1, A2b or A3 agonist activity or A2a antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-cest agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02712 and AAA02723 to
                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                  adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                          Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:694.
                                                                                                                                                                                                                                                                                                                                                                                                   adenosine Al receptor; antisense oligonucleotide; hypoxia;
                                                                                  ö
                                           DB 1; Length 15;
                                                                                Indels
Sequence 15 BP; 2 A; 2 C; 9 G; 2 T; 0 U; 0 Other;
                                                                                5.
                                       67.5%; Score 10.8; DB
85.7%; Pred. No. 85;
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                              AAA03410 standard; DNA; 15 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0088501P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-00093972
98US-0088657P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIG-) EPIGENESIS PHARM INC
                                                                                                               2 GGCGGCGGCATCG 15
                                                                                                                                                    2 GGAGGGCGCCATGG 15
                           Query Match
Best Local Similarity 85.79
Watches 12, Conservative
                                                                                                                                                                                                                                                                                                                        19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-7UN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                     AAA03410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nyce JW,
                                                                                                                                                                                                           RESULT 27
S
                                                                                                                                                                                                                                                                    ò
                                                                                                                                                  g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antilnflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oligonucleotides and compositions (1) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (1) can have respiratory, bronchodilator, antinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (1) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and
                    oligonucleotides for use in the composition of the present invention. AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other phosphorothicate oligonucleotides used in the exemplification of the
                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes low adenosine (A) content antisense
specifically claimed phosphorothioate antisense
                                                                                                                                                                                                       ö
                                                                                                                                                                DB 1; Length 15;
                                                                                                                                                                                                       2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor polynucleotide fragment #719.
                                                                                                                       Sequence 15 BP; 2 A; 3 C; 9 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                     85;
                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                            67.5%; Score 10.8; 85.7%; Pred. No. 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 14; Page 117; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                              AAF19152 standard; DNA; 15 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EAST CAROLINA.
                                                                                                                                                                                                                                           2 GGCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                1 ĠĠAĠĠĠĠĠĠĠĸĦĠĠ 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                               Local Similarity 85.7 ses 12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-679539/66.
  AAA03715 represent
                                                                                    present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYEC-) UNIV EAST
(NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                        AAF19152;
                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                       RESULT 28
                                                                                                                                                                                                                                                                                                                                                              AAF19152
  88888888
                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system receptors. (NS and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distrass syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary condition selected from pulmonary vincertions, bronchitis, and/or cancer. AAP18434 to AAF21543 represent human polymucleotide fragments and antisense oligonucleotides used in the exemplification of ö Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions. Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; immeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic thinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; Gaps ö 67.5%; Score 10.8; DB 1; Length 15; 85.7%; Pred. No. 85; Human adenosine Al receptor polynucleotide fragment #740. Indels 2; Sequence 15 BP; 2 A; 2 C; 9 G; 2 T; 0 U; 0 Other; 0; Mismatches Claim 14; Page 117; 1592pp; English. AAF19173 standard; DNA; 15 BP. 24-MAR-2000; 2000WO-US008020 99US-0127958P (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W. 2 GGCGGCGGCATCG 15 2 deaddeccechied 15 14-MAR-2001 (first entry) Local Similarity 85.7 es 12; Conservative the present invention WPI; 2000-679539/66. WO200062736-A2. Homo sapiens. 06-APR-1999; 26-OCT-2000 AAF19173; Query Match Nyce JW; cancer; Best Loca Matches RESULT 29 AAF19173 8866666666666666666888ઠે

The present invention describes low adenosine (A) content antisense oligomucleotides and compositions (I) comparising them. In the antisense cligomucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analyseis, cimmunosuppressive, antisathmatic, hypotensive and cytostatic activities expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimmlating and activating peptide factors and transmitters, transcription factors, communoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system (CNS) and peripheral nervous and non-nervous system creeptors, binding proteins and malignancy associated proteins. The artisense oligomucleotides may be used in this way to treat disorders contrains respiratory obstruction (especially pulmonary obstruction and/or lungiantion, allergy (ies) and/or surfactant hypoproduction which are associated with a disease or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergy, pulmonary allergies, branchies, branchies of CDPD), while the proper and a sthma, impeded respiratory distress syndrome conditions at the active and allergies, and allergies, branchies of conditions elected from pulmonary vasoconstriction, inflammation, allergies branchies of the proper and a sthma, impeded respiratory distress syndrome conditions while are associated with a disease or allergies, asthma, impeded respiratory conditions while an ease of CDPD), while the proper proper proper and a proper ö Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic; cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid; skin disorder; Insulin-like Growth Factor. I receptor; IGF-1; pityriasis; IGF binding procein; IGFB-2; IGFBP3; inflammation; psoriasis; pilatis; growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba; keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease; hyperneovascular condition; hyperplasia; kidney disease; neobascular condition; hyperplasia; kidney disease; pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of Gaps present invention describes low adenosine (A) content antisense . 0 DB 1; Length 15; Indels Sequence 15 BP; 2 A; 3 C; 9 G; 1 T; 0 U; 0 Other; 67.5%; Score 10.8; D 85.7%; Pred. No. 85; iive 0; Mismatches Edmondson SR; (MURD-) MURDOCH CHILDRENS RES INST. 21-JUN-2000; 2000WO-AU000693. IGFBP2 oligonucleotide #101. AAF45262 standard; DNA; 15 2 GGCGGCGCCATCG 15 1 ĠĠAĠĠĠĠĠĠĠĊĂŢĠĠ 14 30-MAR-2001 (first entry) Wraight CJ, Werther GA, Local Similarity 85.7 nes 12; Conservative the present invention WO200078341-A1. Homo sapiens. 21-JUN-1999; 28-DEC-2000. AAF45262; Query Match Matches RESULT 30 \$ ò 셤

that

```
Ameliorating the effects of a disorder, e.g. psoriasis, by administering
                                                                                                                                                                                                                                                                                                                                  Edmondson SR
                                                                                                                                                                                                                                                                                                                        (MURD-) MURDOCH CHILDRENS RES INST.
                                                                                                                                                                                                                                                                                                     21-JUN-2000; 2000WO-AU000693
                                                                                                                                                                                                                                                                                                               99US-0140345P
                                                                                                                                                                                                           (first entry)
                                                                                                                                                             14 GGCGGTCGCCAGCG 1
                                                                                                                                         Local Similarity 85.7 es 12; Conservative
                                                                                                                                                                                                                                                                                                                                  Werther GA,
                                                                                                                                                                                                                                                                                                                                           WPI; 2001-041421/05.
                                                                                                                                                                                                                                                                                  WO200078341-A1.
                             inflammation.
                                                                                                                                                                                                                                                                                                              21-JUN-1999;
                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                           30-MAR-2001
                                                                                                                                                                                                                                                                                            28-DEC-2000
                                                                                                                                                                                                                                                                                                                                 Wraight CJ,
                                                                                                                                                                                                  AAF45261;
                                                                                                                                     Query Match
                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                               RESULT 31
g
                                                                                                                                                        ઠે
```

The present invention relates to a method for ameliorating the effects of skin disorders. The method comprises contacting the skin with an antisense oligonuclectide, (for Insulin-like Growth Factor [IGF]-1 receptor, IGF binding protein [IGFBP]-2 or IGFBP3), which is capable of inhibiting or reducing growth factor mediated cell proliferation, inflammation and/or other disorders. The present sequence is an oligonucleotide which can be used to design the antisense oligonucleotide which can be used to design the antisense oligonucleotides of the present invention (see AAF45151 and AAF45153-COMPAPATOR). The method is useful for ameliorating the effects of psoriasis, colfuthyosis, pityriasis, ruba, pilaris, serborrhoea, keloids, keratosis, neoplasias, scleroderma, warts, benign growths, cancers of the skin, a hyperneovascular condition such as a neovascular condition of the retina, brain or skin, growth factor-mediated malignancies, other sclerotic condition of the inside of blood ö Ameliorating the effects of a disorder, e.g. psoriasis, by administering UV (ultra-violet) treatment (optional) and an antisense nucleic acid that inhibits or reduces growth factor mediated cell proliferation and/or Antisense therapy; antiproliferative; antiinflammatory; antipsoriatic; cytostatic; dermatological; cardiant; virucide; ophthalmological; keloid; skin disorder; insulin-like Growth Factor 1 receptor; IGF-1; pityriasis; IGF binding protein; IGFBP-2; IGFBP3; inflammation; psoriasis; pilaris; growth factor mediated cell proliferation; ichthyosis; serborrhoea; ruba; keratosis; neoplasia; scleroderma; wart; skin cancer; sclerotic disease; hyperneovascular condition; hyperplasia; kidney disease; Gaps ö 67.5%; Score 10.8; DB 1; Length 15; Indels Sequence 15 BP; 2 A; 8 C; 4 G; 1 T; 0 U; 0 Other; 2; 0; Mismatches Pred. No. 85; neovascular condition of the retina; ss Example 6; Page 34; 201pp; English. vessels or any other hyperplasia AAF45261 standard; DNA; 15 BP. IGFBP2 oligonucleotide #100. 85.78; 2 GGCGGCGGCATCG 15 WPI; 2001-041421/05.

```
The present invention relates to a method for ameliorating the effects of skin disorders. The method comprises contacting the skin with an antisense oligonucleotide, (for Insulin-like Growth Factor [IGP]-1 receptor, IGF binding protein [IGFB]-2 or IGFB]-3, which is capable of inhibiting or reducing growth factor mediated cell proliferation.

Inflammation and/or other disorders. The present sequence is an oligonucleotide which can be used to design the antisense oligonucleotide which can be used to design the artisense oligonucleotide which can be used to design the effects of psoriasis, chipyosis, pityriasis, ruba, plaris, serborthoea, keloids, keratosis, neoplasias, scleroderma, warts, benign growths, cancers of the skin, a hyperneovascular condition such as a neovascular condition of the retina, disease, kidney disease, hyperproliferation of the inside of blood vessels or any other hyperplasia
                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
UV (ultra-violet) treatment (optional) and an antisense nucleic acid inhibits or reduces growth factor mediated cell proliferation and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; antisense; lung dysfunction; nasal airway dysfunction;
                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor antisense fragment no.709.
                                                                                                                                                                                                                                                                                                                                                                   Sequence 15 BP; 1 A; 8 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 85;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                      Score 10.8;
Pred. No. 85
                                                                 Example 6; Page 34; 201pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                      67.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGCGGGCGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABZ94846 standard; DNA; 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15 GGCGGTCGGCAGCG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                     12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200285308-A2.
                                inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABZ94846;
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABZ94846
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ਨੇ
```

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or

Disclosure; SEQ ID NO 10088; 872pp; English

ubiquinone

Aguilar D;

Katz E, Pabalan J,

i Y, Sandrasagra A, Ka Tang L, Shahabuddin S;

Li Y,

Nyce JW.

Miller S,

WPI; 2003-229219/22

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5, or 3 end genomic flanking regions, 5, and 3 intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or hasal airway dysfunction and a second active agent comprising an antiniflammatory articlal and ubiquinons of composition of the invention has antiinflammatory, antiallergic, antiaethmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy, the composition is useful for treating or preventing are prophylactic or therapeutic respiratory effect of an entishammatory steroid in a subject, for reducing or deptenting levels of corrector, producing bronchodilation, increasing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or uning inflammation, lung allergies, or a respiratory disease or condition, lung allergies, or a respiratory disease or condition.

Note: The sequence data for this parent is not represented in the printed specification, but was obtained in electronic format directly from WIPO ftp.wipo.int/pub/published_pct_sequences $\frac{1}{2}$

Sequence 15 BP; 2 A; 2 C; 9 G; 2 T; 0 U; 0 Other;

Gaps ö 67.5%; Score 10.8; DB 1; Length 15; 85.7%; Pred. No. 85; Indels 2; 0; Mismatches Local Similarity 85.7 les 12; Conservative Query Match Best Loca Matches

ö

ઠે

ABZ94867; RESULT 33 ABZ94867

ABZ94867 standard; DNA; 15 BP. (first entry) 17-0CT-2003

Human adenosine Al receptor antisense fragment no.730.

Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.

Homo sapiens.

WO200285308-A2

31-OCT-2002

23-APR-2002; 2002WO-US013135

24-APR-2001; 2001US-0286137P

(EPIG-) EPIGENESIS PHARM INC

Pabalan J, Katz E, Sandrasagra A, Ka J, Shahabuddin S; Li Y, Sar Tang L, Nyce JW, Miller S,

Aguilar

WPI; 2003-229219/22.

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or ubiquinone

Disclosure; SEQ ID NO 10109; 872pp; English

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the intiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or masal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiathmatic, hypotensive, communosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy, The composition may have a use in antisense gene therapy. The composition may have a cuse in antisense yene therapy. The composition may have a use in antisense yene therapy. The composition may have a cuse in antisense yene therapy. The composition may have a use in antisense yene therapy. The composition may have a cuse in attismatory steroid in a subject, for reducing or depleting levels of for entititianmatory steroid in a subject, for reducing levels of adenosine of compliant in a subject, stissue, or treating bronchodilation, increasing levels of ubiquinone or lung suffactant in a subject stissue, or treating bronchoconscription, cludy inflammation, lung allergies, or a respiratory disease or condition.

Note: The sequence data for this patent is not represented in the printed appetition in the parting appetition in the parting of a percification, but was obtained in electronic format directly from WIPO ö Gaps ö DB 1; Length 15; Indels Sequence 15 BP; 2 A; 3 C; 9 G; 1 T; 0 U; 0 Other; at ftp.wipo.int/pub/published_pct_sequences 0; Mismatches 67.5%; Score 10.8; I 85.7%; Pred. No. 85; BP. 2 GGCGGCGCCATCG 15 1 GGAGGCGCCATGG 14 12; Conservative Best Local Similarity Query Match Matches RESULT 3. ð 셤

ABD18715 standard; DNA; 15

ABD18715;

29-JUL-2004 (first entry)

Human adenosine Al receptor oligonucleotide fragment 730.

Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallargic, antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cycostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distresses syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. THE STATE OF STATE OF

Homo sapiens.

WO200285309-A2.

31-OCT-2002.

23-APR-2002; 2002WO-US013143.

24-APR-2001; 2001US-0286036P.

(EPIG-) EPIGENESIS PHARM INC.

Ä Aguilar Pabalan J, Katz E, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; Nyce JW, I Miller S,

WPI; 2003-093058/08.

Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted to nucleic acids associated with lung airway or lung dysfunction, and bronchodilating agent.

```
This invention describes a noves composition (a) a first active agent, comprising oligonuclectides, effective for alleviating control respiratory tract inflammation, allergies and bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine espiratory tract inflammation, allergies and creducing adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonuclectides are derived from a gene encoding or regulating cypression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mana. The invention also describes a kit, that composition or cancer and can be anti-sense to the corresponding mana. The invention also describes a kit, that composition of the invention has antiallargic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered correduction comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung corresponding to inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, content of the anti-sense oligos corresponding to the rangelantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonuclectides into products that free adenosine into the system correction, the anti-sense oligos or prevent any unwanted effects due to it tesue environment and thereby, to
                                                                     invention describes a novel composition (a) a first active agent,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 15 BP; 2 A; 3 C; 9 G; 1 T; 0 U; 0 Other;
           Claim 15; SEQ ID NO 10109; 763pp; English.
```

Gaps ó, DB 1; Length 15; 2; Indels 0; Mismatches 67.5%; Score 10.8; I 85.7%; Pred. No. 85; 12; Conservative Query Match Best Local Similarity Matches

ö

2 GGCGGCCGCATCG 15 1 GGAGGGCGGCATGG 14 ద ઠે

ABD18694 standard; DNA; 15 BP. (first entry) 29-JUL-2004 ABD18694; RESULT 35 ABD18694

Human adenosine Al receptor oligonucleotide fragment 709.

Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthematic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.

Homo sapiens.

31-OCT-2002

WO200285309-A2.

23-APR-2002; 2002WO-US013143.

24-APR-2001; 2001US-0286036P.

```
(EPIG-) EPIGENESIS PHARM INC.
```

ä Aguilar Pabalan J, Katz E, Sandrasagra A, Ka L, Shahabuddin S; Li Y, Sar Tang L, Miller S. Nyce JW,

WPI; 2003-093058/08.

oligonucleotide containing less percentage of adenosine, targeted unucleic acids associated with lung airway or lung dysfunction, and Pharmaceutical composition for treating asthma, has antisense bronchodilating agent.

Claim 15; SEQ ID NO 10088; 763pp; English.

This invention describes a novel composition of a tribe active agent, comprising oligonucleotides, effective for alleviating by themson describes, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and composition administered to a mammal. The bronchoconstriction or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating cypefunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery of device, in separate containers, (b) the oligonucleotides, (c) the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered correlation comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung creduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory characters on enters and pulmonary vasoconstriction, the heart of the anti-sense oligon or content of the anti-sense oligon corresponding to the humidines or cancer. The reduced adenosine content of the anti-sense or content of the party of the prevention of the humidine of the humidian of the thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to This invention describes a novel composition (a) a first active agent, e.g., lung, brain, heart, kidney, etc, prevent any unwanted effects due to it

Sequence 15 BP; 2 A; 2 C; 9 G; 2 T; 0 U; 0 Other;

Gaps ; 0 DB 1; Length 15; Indels .; 7 Pred. No. 85; 0; Mismatches 67.5%; Score 10.8; 85.7%; Local Similarity 85.7 nes 12; Conservative Query Match Matches

ö

2 GGCGGCGGCATCG 15

ઠે 셤

AAV47234 standard; DNA; 12 BP. RESULT 36 AAV47234

AAV47234;

10-NOV-1998 (first entry)

Antisense oligonucleotide 734, targeting adenosine Al receptor.

Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.

Synthetic

Homo sapiens.

```
The specification describes antisense oligonucleotides (AAX52869-X55271)
directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, ending and
non-coding regions of RNAs corresponding to target genes, gene initiation
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
end and the juxta-section between coding and non-coding regions and all
codonis or mixtures. The antisense oligonucleotides may be derived
trom sequences AAX55272-74. These multiple target oligonucleotides
conditions or mixtures. The new used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
caute aathma, allergies, asthma, impeded respiration, respiratory
distress syndrome, pain, cystic fibrosis, pulmonary hypertension,
clisease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, pancreatic cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergy; allergic disease; bronchoconstriction; inhibitor; antinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema;
hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                        New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65.0%; Score 10.4; DB 1; Length 12; 91.7%; Pred. No. 76; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Low adenosine antisense oligonucleotide SEQ ID NO:743.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure, Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP.
                                                                                                                                                                      98WO-US019419
                                                                                                                                                                                                               97US-0059160P
                                                                                                                                                                                                                                 98US-00093972.
                                                                                                                                                                                                                                                                    (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA33054 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 91.7
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGCAT 13

    GGAGGGCGCCAT 12

                    prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                            vasoconstriction.
                                                                                                                                                                                                               17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUL-2000
                                                                                                                                                                        .7-SEP-1998;
                                                                                                                                                                                                                                   09-JUN-1998;
                                                                                             WO9913886-A1
                                                                                                                                    25-MAR-1999.
                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA33054;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                               Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA33054
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inflammation in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                              Ireating respiratory disease with antisense sequences directed against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hyporomeriction; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemda; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                               adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                    /*tag= a
/note= "contains phosphorothioate internucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    65.0%; Score 10.4; DB 1; Length 12; 91.7%; Pred. No. 76; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           allergy, emphysema and cystic fibrosis
                  location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 12; Page 8-24; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX53611 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                  96US-00757024.
                                                                                                                                                                                                               97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 91.7%;
les 11; Conservative
                                                                                                                                                                                                                                                                                            EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                           linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGGGCGCAT 12
                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-322464/28.
                  Key
modified_base
                                                                                                                                                                                                                                                                                            (UYEC-) UNIV
                                                                                                                                      WO9823294-A1
                                                                                                                                                                                                               26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-JUL-1999
                                                                                                                                                                                                                                                      26-NOV-1996;
                                                                                                                                                                        04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAX53611;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                   Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 37
AAX53611
ò
```

Gaps

ö

```
The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets oligonucleotide (ON) with low adenosine (up to 15%), which targets conditions involved in bronchocometriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, and/or confidence affects and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lisease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impedde respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the CONs reduces side effects. The A-containing ONs break down with the release of decayadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA2312 to AAA3312 represent the nucleotide sequences given in the asquence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 from the previously named sequences. SEQ ID NO:11 to 1860 (AAA33232 to AAA3392) are specifically claimed ONS from the present invention and inflammation. A Sequence side of the present invention of not match and the present invention of the present invention of not match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  puences given in the disclosure of the present invention do not match with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
  pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:697.
                                                                                                                                                                                                                                                                                                                                                                                                  New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hyperteneion, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65.0%; Score 10.4; DB 1; Length 12; 91.7%; Pred. No. 76; ive 0; Mismatches 1; Indels
                      cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 18; Page 359; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA03413 standard; DNA; 12 BP.
                                                                                                                                                                                           99WO-US017712.
                                                                                                                                                                                                                                 98US-0095212P
                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 91.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAGGCGCCAT 12
                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-205971/18.
                                                                                                       WO200009525-A2
                                                                Homo sapiens.
                                                                                                                                                                                       03-AUG-1999;
                                                                                                                                                                                                                                 03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA03413;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                     Nyce JW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAA03413
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEX SEX EXEX
```

```
ö
                                                                                                                                                                                                                                                                                                                                     comprising
Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA03715 represent specifically claimed phosphorothicate antisense oligonuclectides for use in the composition of the present invention. AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           phosphorothicate oligonuclectides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                  The present invention describes a pharmaceutical composition,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 10.4; DE Pred. No. 76; 0; Mismatches
                                                                                                                                                                                                                                                                                                              Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            琚.
                                                                                                                                                        99WO-US012775.
                                                                                                                                                                                     98US-00093972.
                                                                                                                                                                           98US-0088501P
                                                                                                                                                                                                                  (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65.0%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF19176 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGGGCGCCAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCGGCGCGT
                                                                                                                                                                                                                                                            WPI; 2000-116433/10.
                                                                                                                                                                                                                                       Nyce JW, Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       present invention
                                                                                                                                                                                                                                                                              Novel compositrenal injury.
                                                                                 Homo sapiens
                                                                                                              WO9963938-A2
                                                                                                                                                      08-JUN-1999;
                                                                                                                                                                          08-JUN-1998;
                                                                                                                                                                                               09-JUN-1998;
                                                                                                                                 16-DEC-1999
                                                                                                                                                                                     09-JUN-1998
                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF19176
  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Α×
```

Query Match

DB 1; Length 12;

65.0%; Score 10.4;

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (C) is an have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polyapetides associated with cativity disorders and malignancies, such as stimulating and cativity disorders and malignancies, such as stimulating and cativity disorders and transmitters, cranscription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chanding proteins, adenosine receptors, cytokines and chemokine receptors, adenosine receptors or binding proteins and nervous and non-nervous system or receptors, and peripheral nervous and non-nervous system creceptors, binding proteins and malignancy associated proteins. The receptors, binding proteins and malignancy associated proteins. The creceptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or condition will have associated with a disease or condition and from milmonary inflammation, inflammation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
                                                                                                                                                                                                                                                                                                                                                                         human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
                                                                                                                                                                                                                                                                                                                        Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
                                                                                                                                                                                                                Human adenosine Al receptor polynucleotide fragment #743.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 14; Page 117; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0127958P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EAST CAROLINA.
                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UYEC-) UNIV
                                                                                                        14-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cancer; ss.
AAF19176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nyce JW;
```

```
The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation coodon, coding regain, 5 or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entinflammatory steroid and ubjudinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine or increasing levels of indiguinone or increasing levels of denosine.
                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pharmaceutical composition for treating ailments associated with impaired
                                                                                                                                                                                                                                                                                                                                                 Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pabalan J, Aguilar D;
                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65.0%; Score 10.4; DB 1; Length 12;
                        Indels
                                                                                                                                                                                                                                                                                                                Human adenosine Al receptor antisense fragment no.733.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                        ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; SEQ ID NO 10112; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            at ftp.wipo.int/pub/published_pct_sequences
    Pred. No. 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                      ö
                                                                                                                                                                                                 ABZ94870 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (EPIG-) EPIGENESIS PHARM INC.
91.7%;
                                                                                                                                                                                                                                                                            17-OCT-2003 (first entry)
                          11; Conservative
                                                            2 GGCGGGCGCAT 13
                                                                                                   GGAGGGCGCCAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-229219/22.
      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ubiquinone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Miller S,
                                                                                                                                                                                                                                       ABZ94870;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce JW,
                    Matches
                                                                                                                                                                              ABZ94870
                                                                                                                                                                                                   ð
                                                                                                 셤
```

```
This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating construction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The collgonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA.

CC The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiathantic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The composition, and/or bronchoconstriction and/or lung cinflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory
                            ö
                                                                                                                                                                                                                                                                                                                                                                         Human, antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis;
                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted truncleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pabalan J, Aguilar D;
                          ;
                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor oligonucleotide fragment 733.
                          Indels
                          1;
                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 15; SEQ ID NO 10112; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pulmonary transplantation rejection; ds.
    Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sandrasagra A,
                                                                                                                                                                                                           ABD18718 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-APR-2001; 2001US-0286036P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (EPIG-) EPIGENESIS PHARM INC.
  91.78;
                                                                                                                                                                                                                                                                                                 (first entry)
                        11; Conservative
                                                             2 GCCGCCCCAT 13
                                                                                                       GGAGGCGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-093058/08.
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Li Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200285309-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                               29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW, L
Miller S,
                                                                                                                                                                                                                                                     ABD18718;
                   Matches
                                                                                                                                                                    RESULT 42
                                                                                                                                                                                          ABD18718
                                                               ð
                                                                                                    g
```

```
ö
distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human adenosine Al receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonuclectides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonuclectides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                              Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= a
/note= "contains phosphorothioate internucleotide
                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antisense oligonucleotide 712, targeting adenosine Al receptor.
                                                                                                                                                                                                     65.0%; Score 10.4; DB 1; Length 12; 91.7%; Pred. No. 76; 1; Indels ive 0; Mismatches 1; Indels
                                                                                                                                                                 Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                    AAV47212 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linkages"
                                                                                                                                                                                                                                        11; Conservative
                                                                                                                                                                                                                                                                            2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                              1 GGAGGCGCCAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1998-322464/28.
                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                        AAV47212;
                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nyce JW;
                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                  RESULT 43
                                                                                                                                                                                                                                                                                                                                                                                  AAV47212
     8888888888888
                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                            용
```

ö Sequences ANV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis Treating respiratory disease with antisense sequences directed against adenosine or bradyknin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc. Gaps Secondary structure; mRNA; phosphorothicate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss. /*tag= a /note= "contains phosphorothioate internucleotide Antisense oligonucleotide 733, targeting adenosine A1 receptor. ö 65.0%; Score 10.4; DB 1; Length 13; 91.7%; Pred. No. 86; Indels 1; Sequence 13 BP; 2 A; 2 C; 7 G; 2 T; 0 U; 0 Other; 0; Mismatches Location/Qualifiers Claim 12; Page 8-24; 47pp; English AAV47233 standard; DNA; 13 BP. 96US-00757024. 97WO-US022017. (UYEC-) UNIV EAST CAROLINA. (first entry) linkages" 11; Conservative 2 GGCGGGCGGCAT 13 2 GGAGGGCGGCAT 13 WPI; 1998-322464/28. Best Local Similarity Matches 11; Conserv Key modified_base Homo sapiens. 26-NOV-1997; WO9823294-A1 26-NOV-1996; 10-NOV-1998 04-JUN-1998 Synthetic AAV47233; Query Match Nyce JW; 8888888888ઠ 셤

```
The specification describes antisense oligonucleotides (AAX52869-X55271)
directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, coding and
non-coding regions of RNAs encoding intron-exon borders, the 5'-end, the 3'
end and the juxta-section between coding and non-coding regions and all
segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX5272-74. These multiple target oligonucleotides
from sequences AAX5272-74. These multiple target oligonucleotides
capecifically AAX5180-271) can be used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
acute asthma, allergies, asthma, impeded respirator, respiratory.
C distress syndrome, pain, cystic fibrosis, pulmonary hypertension,
                                                                                                                                                                             ö
transmembrane segments. These oligonuclectides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                             .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                         DB 1; Length 13;
                                                                                                                                                                             1; Indels
                                                                                                Seguence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                     Score 10.4; DB; Pred. No. 86; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                        BP.
                                                                                                                                     65.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-0059160P.
                                                                                                                                                                                                                                                                                                                                                        AAX53589 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                           Local Similarity 91.7
nes 11; Conservative
                                                                                                                                                                                                                   2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                       1 GGAGGGCGCAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                                   05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                       Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                              AAX53589;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nyce JW;
                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                    RESULT 45
                                                                                                                                                                                                                                                                                                                                      AAX53589
                                                                                                                                                                                                                                                                                                                                                                            888888
                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                       셤
```

```
ö
pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX5510-74. These multiple target oligonucleotides (specifically AAX5510-271) can be used for the antisense treatment of diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carccinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Antisense oligonucleotide; multiple target; antisense treatment;
                                                                                                                                                                                                                       .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis;
                                                                                                                                                                            65.0%; Score 10.4; DB 1; Length 13; 91.7%; Pred. No. 86; 1; Indels 1; Indels
                                                                                                                                     Sequence 13 BP; 2 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure, Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                 AAX53610 standard; DNA; 13 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-0059160P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUL-1999 (first entry)
                                                                                                                                                                                                Local Similarity 91.7
nes 11; Conservative
                                                                                                                                                                                                                                                          2 GGGGGGGGGAT 13
                                                                                                                                                                                                                                                                                                 GGAGGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9913886-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-SEP-1997;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                        AAX53610;
                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nyce JW;
                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                          RESULT 46
                                                                                                                                                                                                                                                                                                                                                                               AAX53610
  8$3333333
                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                               a
```

```
ö
                                                                                                                       88
                                                                              e.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antialatergic, antiatathmatio. The ON can have antiinflammatory. Antialatergic, antiatathmatio, cytostatic and analgesic activities. The compositions are useful for the treatment of disease associated with inflammation, impaired aliways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes a new composition comprising an antisense
acute asthma, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphyeema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, a well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    phosphorothioate; impaired respiration; infilammation; allergy; allergy; allergy; disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; adenosine receptor; low adenosine antisense oligonucleotide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                           65.0%; Score 10.4; DB 1; Length 13; 91.7%; Pred. No. 86; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Low adenosine antisense oligonucleotide SEQ ID NO:721.
                                                                                                                                                                                                     Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 18; Page 356; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA33032 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                          11; Conservative
                                                                                                                                                                                                                                                                                                                                   2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                              1 GGAGGGCGCCAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200009525-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-FEB-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA33032;
                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cancers.
                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA33032
        8888888888888
                                                                                                                                                                                                                                                                                                                                   à
                                                                                                                                                                                                                                                                                                                                                                           셤
```

ö Carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are AAA33992) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorochioate; impaired respiration; inflammation; allergy; allergy; allergic disease; bronchoconstriction; inhibitor; antinflammatory; antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain, cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss. Gaps and cancers such as leukaemias, lymphomas, New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or ; 0 DB 1; Length 13; Indels Low adenosine antisense oligonucleotide SEQ ID NO:742. 1; Sequence 13 BP; 2 A; 2 C; 7 G; 2 T; 0 U; 0 Other; 0; Mismatches 86; 65.0%; Score 10.4; 91.7%; Pred. No. 86 Claim 18; Page 359; 1343pp; English. AAA33053 standard; DNA; 13 BP. 99WO-US017712 98US-0095212P EAST CAROLINA (first entry) pulmonary disease (COPD), Best Local Similarity 91.7 Matches 11; Conservative 2 GGCGGCGGCAT 13 2 GGAGGGCGCCAT 13 WPI; 2000-205971/18 WO200009525-A2. Homo sapiens UYEC-) UNIV 03-AUG-1999; 03-AUG-1998; 28-JUL-2000 24-FEB-2000 AAA33053; Query Match Nyce JW; cancers. RESULT 48 AAA33053 셤 \$ ò

impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive conditions, pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the cancer decision of a content of the accordances including breast and prostate cancer. The reduction of the adenosine content of the conscious state of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the conclocitde sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 1830 (AAA3323 to AAA33922) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence ö Novel composition for treating or preventing e.g. cardiopulmonary and Gaps Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor. phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss. Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:675. for the treatment of diseases associated with inflammation, .; 0 Score 10.4; DB 1; Length 13; Pred. No. 86; 0; Mismatches 1; Indels Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other; ; BP. 99WO-US012775 98US-0088501P 98US-00093972 98US-0088657P (EPIG-) EPIGENESIS PHARM INC. ch 65.0%; 1 Similarity 91.7%; 11; Conservative AAA03391 standard; DNA; 13 19-MAY-2000 (first entry) 2 GGCGGGCGCAT 13 GAGGGCGCAT 12 WPI; 2000-116433/10. Best Local Similarity Matches 11; Conser Nyce JW, Hill JL; injury. Homo sapiens. W09963938-A2 08-JUN-1999; 08-JUN-1998; 09-JUN-1998; 09-JUN-1998; 16-DEC-1999. Synthetic. AAA03391; Query Match listing renal RESULT 49 AAA03391 ò g

Claim 17; Page 34; 252pp; English

WPI; 2000-116433/10.

Page 31

Wed May 10 10:49:51 2006

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits at least one agent (I) that prevents, alleviates and/or inhibits are least one meant of the prevents and demosine mediated dardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine AZa receptor agonist (Ia), or an oligomucleotide compositions are consequences) or to all segments of mRNA encoding the adenosine (A), that is antisense to target ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 receptors, and has A1, A2b or A3 receptors, and compositions are used to prevent, alleviate and/or reteat adenosine compositions are used to prevent, alleviate and/or treat adenosine compositions are used to prevent, alleviate and/or relative associated with ischaemia, toxin release and/or receptor-mediated cardiac, lung and/or renal damage or failure compositions are used or prevent, alleviate and/or relative associated with sepsis); allergic rhinitis; chronic obstructive supraventricular tachycardia; (a); allergic rhinitis; chronic obstructive composition of druges or imaging agents, e.g. adenosine for treating supraventricular tachycardia; (a); allergic rhinitis; chronic obstructive with acute inflammation. AAA02713, AAA02721 and AAA03732 to dispense and secrition. AAA03716 represent specifically claimed phosphorothicate antisense colligonucleotides for use in the composition of the present of the present content of the receptor content of the present content of the present content of the present content of the prevent invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine As receptor; adenosine As receptor; aphosphory adenosine As receptor; phosphorocthicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; enparamenticular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:696.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1; Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 13 BP; 2 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       65.0%; Score 10.4; I 91.7%; Pred. No. 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA03412 standard; DNA; 13 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 91.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 geaggececkr 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ното варіепв.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W09963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA03412;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA03412
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
```

98US-0088501P. 98US-00093972. 98US-0088657P.

08-JUN-1998;

09-JUN-1998;

EPIG-) EPIGENESIS PHARM INC.

Hill JL;

Nyce JW,

```
The state of agent (I) that prevents, alleviates and/or inhibits

adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine Aza receptor agonist (Ia), or an oligonucleotide

(Ib), containing less than 15% adenosine (A), that is antisense to target

(Ib), containing less than 15% adenosine (A), that is antisense to target

(Ib), containing less than 15% adenosine (Ia), that is antisense to target

(Ib), containing less than 15% adenosine (Ia), that is antisense to target

(Ib), containing RNA, to genomic flanking regions (i.e. 5' or 3'

(Ib) and optionally also contains one or more surfactants. The

compositions are used to prevent, alleviate and/or treat adenosine

(Ib), and optionally also contains one or more surfactants. The

compositions are used to prevent, alleviate and/or treat adenosine

(C) and (Ib), and optionally also contains one or more surfactants. The

compositions are used to prevent, alleviate and/or treat adenosine

(particularly where associated with ischaemia, toxin release and/or

(particularly where associated with ischaemia, toxin release and/or

administration of drugs or imaging agents, e.g. adenosine for treating

contains associated with sepsies); allergic rhinits; chronic obstructive

(e.g. associated with sepsies); allergic rhinits; chronic obstructive

contains associated with hypoxia associated with administration

of stress-test agents, particularly where such conditions are associated

contains and pagents, particularly where such conditions are associated

contains and administration. Adv02717, Adv02721 and Adv02721 and Adv02721 chronic obstruction.

Adv03715 represent specifically claimed phosphorothioate antisense

coligonucleotides for use in the composition of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                              comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Low adenosine antisense oligonucleotide, phosphorothioate, allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiathmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other phosphorothioate oligonucleotides used in the exemplification of the
                                                 composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                           present invention describes a pharmaceutical composition,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65.0%; Score 10.4; DB 1; Length 13; 91.7%; Pred. No. 86; 1; Indels ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human adenosine Al receptor polynucleotide fragment #721.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                       Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF19154 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGCGGCCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200062736-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF19154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                 Novel
                                                                           renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 51
AAF19154
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
ABZ94848;
                                                                                                                                                                                                                                                                                                                       Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 53
ABZ94848
ID ABZ94
XX
AC ABZ94
 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                        The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. C immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. C the antisense oligonaclectides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with Lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoslobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system peptide receptors, binding proteins growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, entering syndry, allergy syndry allergies syndromes (PNS) and allergies, sthutones (PNS) and allergies, sthutones allergies, sthutones (PNS) and allergies syndry is condition and or receptors and or peripheral sequences and or respiratory disperse and or respiratory disperse and or respiratory disperse and or sequences and or sequenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                    Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human, airway disorder; bronchoconstriction; lung inflammation, surfactant depletion; respiratory; bronchodilator; antiinflammatory; surfactant depletion; respiratory; bronchodilator; antiinflammatory; reminuosuppressive, artisathmatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              infections, bronchitis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pulmonary transplantation rejection, pulmonary infections, bronchit
and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 10.4; DB 1; Length 13;
Pred. No. 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human adenosine Al receptor polynucleotide fragment #742.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 13 BP; 2 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                              Claim 14; Page 117; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF19175 standard; DNA; 13 BP.
                                                                                                                                                                                                         and respiratory obstructions.
 99US-0127958P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           65.0%;
91.7%;
                                   (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 91.7
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGAGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the present invention
                                                                                                                             WPI; 2000-679539/66.
                                                    NYCE/) NYCE J W.
06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF19175;
                                                                                            Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 52
 à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

```
oligonucleotides and compositions (1) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradykinin receptors, cytokine and cereptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The creeptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction) and/or bronchoconstriction which are associated with a disease or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             condition selected from pulmonary vasoconstriction, inflammation, allegies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplanterion rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21843 represent human polymucleotide fragments and antisense oligonucleotides used in the exemplification of
pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes low adenosine (A) content antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1; Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 10.4; D
Pred. No. 86;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 14; Page 117; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABZ94848 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 91.7
nes 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGAGGGCGCAT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                            WO200062736-A2
                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                              26-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
```

(first entry)

```
Pharmaceutical composition for treating ailments associated with impaired
                                             Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory; antiallergic; antianflammatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
                                                                                                                                                                                                                                                                                                respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                           Human adenosine Al receptor antisense fragment no.711.
                                                                                                 lung inflammation; respiratory disease; ds
                                                                                                                                                                             23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                    (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                   WPI; 2003-229219/22.
                                                                                                                                                                                                                                                 Tang L,
                                                                                                                                                                                                                                       Li Y,
                                                                                                                                      WO200285308-A2.
                                                                                                                  Homo sapiens
                                                                                                                                                         31-OCT-2002
                                                                                                                                                                                                                                                                                                                    ubiquinone.
                                                                                                                                                                                                                                                 s,
                                                                                                                                                                                                                                       Nyce JW,
                                                                                                                                                                                                                                                  Miller
8
```

```
first active agent comprising an oligomaclectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entitlemanatory steroid and ubiquinone. A composition of the invention has antisinfammatory antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a suse in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or mallignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an entitlenammatory steroid in a subject, for reducing levels of continuing sensitivity to adenosine, reducing levels of adenosine of nung surfactant in a subject stissue, or treating bronchodilation, increasing levels of ubiquinone or lung suffactant in a subject stissue, or treating bronchoconstriction, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                       invention relates to a novel pharmaceutical composition, which has a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 13 BP; 2 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
Disclosure, SEQ ID NO 10090; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ftp.wipo.int/pub/published pct sequences
```

```
ö
                            Gaps
                           ö
   DB 1; Length 13;
                           Indels
                          ٦,
                          0; Mismatches
  65.0%; Score 10.4; 1 91.7%; Pred. No. 86;
                        Matches 11; Conservative
                                               2 GGCGGCCGCAT 13
Query Match
Best Local Similarity
```

2 GGAGGGGGCAT 13

g

ABZ94869 standard; DNA; 13 BP. ABZ94869 RESULT 54 ABZ94869

17-OCT-2003 (first entry)

Human; antisense; lung dysfunction; nasal airway dysfunction; antilinflammatory steroid; ubiguinone; antilinflammatory; antiallergic; antiasthmatic; hypotensive; immuosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; Human adenosine Al receptor antisense fragment no.732. lung inflammation; respiratory disease; ds.

Homo sapiens.

WO200285308-A2

31-OCT-2002.

23-APR-2002; 2002WO-US013135.

24-APR-2001; 2001US-0286137P.

(EPIG-) EPIGENESIS PHARM INC

Aguilar D; Katz E, Pabalan J, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; Miller S, Nyce JW,

WPI; 2003-229219/22.

Aguilar D;

Pabalan J,

Katz E,

Sandrasagra A, Kə L, Shahabuddin S;

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or ubiquinone.

Disclosure; SEQ ID NO 10111; 872pp; English.

first active agent comprising an oligonucleotide antisense to the instantion relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an office of the prophylactic or therapeutic respiratory effect of an office of the prophylactic or therapeutic respiratory effect of an office of the prophylactic or therapeutic respiratory effect of an office of the prophylactic or therapeutic respiratory effect of an office of the prophylactic or therapeutic respiratory effect of an office of the prophylactic or therapeutic respiratory effect of an office of the prophylactic or therapeutic respiratory effect of an office of the prophylactic or therapeutic respiratory effect of an autient symmetry to adenosine, receptor, producing bronchodilation, increasing levels of ubiquinone or the prophylactic or treating bronchoconstriction, increasing contraction, increasing bronchoconstriction, increasing bronchoconstriction, increasing contraction, increasing contraction contracti lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO ftp.wipo.int/pub/published_pct_sequences

Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;

Gaps ö DB 1; Length 13; Indels 1; Pred. No. 86; 0; Mismatches 65.0%; Score 10.4; 91.78; 11; Conservative Best Local Similarity Matches 11: Conserv Query Match

ö

ò

ABD18717 standard; DNA; 13 BP. RESULT 55 ABD18717

ABD18717;

31-OCT-2002 Miller S, ďΚ, 8XCCCCCCCCCCCCCCCCCCCCCCCCX

ä

Aguilar

This invention describes a nover composition, and attitude agent, compositing oligonuclectides, effective for alleviating active agent, composition, respiratory tract inflammation, allergies and reducing adenosine (some sensitivity, levels of adenosine (A) or (A) receptors, curfactant depletion or hyposecretion, when administered to a mammal. The oligonuclectides are derived from a gene encoding or regulating (C) of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonuclectides, (c) instructions for adding a carrier and for use of the kit. The composition of instructions for adding a carrier and for use of the kit. The composition of analgesic, hypotensive, immunosuppressive and cytostatic activity, is a composition compassition composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The composition, and/or broncheconstriction and/or lung cinflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, or conficient, pulmonary infections, pulmonary disease, pulmonary disease, pulmonary disease, pulmonary infections, bronchiss or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the allers and present in the target sense or condition and reference adenosine into products that free administration and present in the target RNA serves to prevent the breakdown of the allery and present in the target RNA serves to prevent and the present in the reduce the anti-sense oligonucleaders. respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; bronchitis; pulmonary transplantation rejection; ds. lung, brain, heart, kidney, etc, tissue environment and thereby, to invention describes a novel composition (a) a first active agent, bronchoconstriction; allergy; hyposecretion; pain; Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted inucleic acids associated with lung airway or lung dysfunction, and Human adenosine Al receptor oligonucleotide fragment 732, Pabalan J, Katz E, S; Claim 15; SEQ ID NO 10111; 763pp; English. unwanted effects due to it Sandrasagra A, 23-APR-2002; 2002WO-US013143 24-APR-2001; 2001US-0286036P (EPIG-) EPIGENESIS PHARM INC (first entry) bronchodilating agent Li Y, Tang L, WPI; 2003-093058/08. WO200285309-A2 Homo sapiens. prevent any e.g.,

Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;

DB 1; Length 13;

Score 10.4; | Pred. No. 86;

65.0%; 91.7%;

Query Match Best Local Similarity

This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating concurrence of promeducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, cuffactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating or expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA.

The invention also describes a kit, that comprises: (a) a delivery of instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a composition comprises oligo and is administered to reduce the production or treating a respiratory, lung or mailgnant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to convain allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, with a disease or condition such as pulmonary vasoconstriction, pulmonary planteres syndrome, pain, cystic fibrosis, allergic thiriating, pulmonary Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. Gaps oligonucleotide containing less percentage of adenosine, targeted unucleic acids associated with lung airway or lung dysfunction, and Aguilar D; ; 0 Pharmaceutical composition for treating asthma, has antisense Human adenosine Al receptor oligonucleotide fragment 711. Indels Pabalan J, ij Mismatches Claim 15; SEQ ID NO 10090; 763pp; English. Katz E, Sandrasagra A, Ka ,, Shahabuddin S; ; 0 ВР. 23-APR-2002; 2002WO-US013143. 24-APR-2001; 2001US-0286036P. (EPIG-) EPIGENESIS PHARM INC ABD18696 standard; DNA; 13 29-JUL-2004 (first entry) 11; Conservative 13 12 bronchodilating agent. 1 GGAGGGCGCCAT 2 GGCGGGCGCAT WPI; 2003-093058/08. Tang L, Ŀi Y, WO200285309-A2. sapiens. 31-OCT-2002. Miller S, ABD18696; Ĭ, Homo Nyce Matches RESULT 56 ð 셤

```
ö
hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human adenosine Al receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Secondary structure, mRNA; phosphorothicate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/note= "contains phosphorothioate internucleotide
                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antisense oligonucleotide 711, targeting adenosine A1 receptor.
                                                                                                                                                                                     DB 1; Length 13;
                                                                                                                                                                                                                           Indels
                                                                                                                                           Sequence 13 BP; 2 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                      Pred. No. 86;
0; Mismatches
                                                                                                                                                                                 Query Match 65.0%; Score 10.4;
Best Local Similarity 91.7%; Pred. No. 86;
Matches 11; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                     AAV47211 standard; DNA; 14 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96US-00757024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linkages"
                                                                                                                                                                                                                                                           GCCGGCCGCCAT 13
                                                                                                                                                                                                                                                                                              GGAGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modified base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-JUN-1998
                                                                                                                                                                                                                                                           ~
                                                                                                                                                                                                                                                                                                                                                                                                                            AAV47211;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                                                                                                                                                                                   RESULT 57
8888888888888
                                                                                                                                                                                                                                                           ઠે
                                                                                                                                                                                                                                                                                            g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense and carget, their antisense oligonucleotides are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or
protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.

    14
/*tag= a
//note= "contains phosphorothioate internucleotide
linkages"

                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antisense oligonucleotide 689, targeting adenosine Al receptor.
                                                                                                                                                                                      ö
                                                                                                                                                  DB 1; Length 14;
                                                                                                                                                                                      1; Indels
                                                                                                             Sequence 14 BP; 2 A; 2 C; 8 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                     95;
                                                                                                                                                                                    0; Mismatches
                                                                                                                                               65.0%; Score 10.4;
91.7%; Pred. No. 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                            AAV47189 standard; DNA; 14 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97WO-US022017.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                    11; Conservative
                                                                                                                                                                                                                     2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                     GGAGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-322464/28.
                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                     10-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                 AAV47189;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                           RESULT 58
                                                                                                                                                                                                                                                                                                                            AAV47189
     88888888
                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                 8
```

disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g.

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of
prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acute asthma, allergy; asthma, impeded respiration, respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis, acute asthma, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary
                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis;
                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                Score 10.4; DB 1; Length 14;
                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                          Sequence 14 BP; 3 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                       Pred. No. 95;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX53588 standard; DNA; 14 BP.
                                                                                                                                                                                                                                    65.0%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                   Local Similarity 91.7
es 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 GGAGGGCGCAT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              prostate cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                                                                                                           Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 59
       8 \times 9 
                                                                                                                                                                                                                                                                                                                                                                                   ò
```

ö The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, including lung acute asthma, allergies, asthma, impeded respiration, respiratory colon cancer, breast cancer, lung cancer, pancreatic cancer, expendential carcinoma, kidney cancer, melanoma, hepatic metastases, a well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis; Gaps New antisense oligonucleotides used in treatment of, e.g. pulmonary Human adenosine Al receptor antisense oligonucleotide fragment. ö DB 1; Length 14; 1; Indels Sequence 14 BP; 2 A; 2 C; 8 G; 2 T; 0 U; 0 Other; Score 10.4; DB Pred. No. 95; 0; Mismatches Disclosure; Page 38; 120pp; English BP. 65.0%; 98WO-US019419 97US-0059160P. 98US-00093972. (UYEC-) UNIV EAST CAROLINA. AAX53566 standard; DNA; 14 05-JUL-1999 (first entry) Query Match
Best Local Similarity 91.7-2 GGCGGGCGCAT 13 2 GGAGGGCGGCAT 13 prostate cancer; ss. WPI; 1999-229400/19. vasoconstriction. 17-SEP-1998; 17-SEP-1997; 09-JUN-1998; WO9913886-A1 25-MAR-1999. Synthetic. AAX53566; Nyce JW; RESULT 60 AAX53566 8888888 ð 원

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are lastful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vascconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypercension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
                                                e.g.
                                                                                  hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, a
well as all types of cancers which may metastasize or have metastasized
to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergy; disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; paln, cystic fibrosla; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
distress syndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas
                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                  ö
                                                             colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic me
                                                                                                                                                                                                          DB 1; Length 14;
                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Low adenosine antisense oligonucleotide SEQ ID NO:698.
                                                                                                                                                          Sequence 14 BP; 3 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                    Score 10.4; DB
Pred. No. 95;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 18; Page 354; 1343pp; English.
                                                                                                                                                                                                                                            .
                                                                                                                                                                                                                                                                                                                                                                                                                                AAA33009 standard; DNA; 14 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0095212P.
                                                                                                                                                                                                    ch 65.0%;
1 Similarity 91.7%;
11; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                    2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                          3 GGAGGCGCCAT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA33009;
                                                                                                                                                                                                    Query Match
Best Local 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancers.
                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                        RESULT 61
                                                                                                                                                                                                                                                                                                                                                                                                             AAA33009
8888888888888
                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                        g
```

```
carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONS reduces side effects. The A-containing ONS break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID No.1 to 2815, and then the last 185 sequences are also called SEQ ID No.1 to 185, but the sequences differ from the previously named sequences. SEQ ID No.11 to 186 (AAA3392) are specifically claimed ONS from the present invention. N.B. Sequences given in the disclosure of the present invention. N.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation,
                                                                                                                                                                                                             puences given in the disclosure of the present invention do not match with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                        65.0%; Score 10.4; DB 1; Length 14; 91.7%; Pred. No. 95; 1; Indels ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Low adenosine antisense oligonucleotide SEQ ID NO:720.
                                                                                                                                                                                                                                                                                               Sequence 14 BP; 3 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 18; Page 356; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAA33031 standard; DNA; 14 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                            GGCGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAGGCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200009525-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                                 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA33031;
                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW;
                                                                                                                                                                                                                                                          listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancers
                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 62
                                                                                                                                                                                                                                       ďn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA33031
        8888888888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

```
impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive fibrosis, pulmonary disease (CODD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the consent and prostate cancer. The A-containing ONS break down with the relaces of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA12313 to AAA35312 represent the involution, which correspond to SEQ ID NO:1 to 2815, and then the present invention, which correspond to SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 185, but the sequence of AAA33992) are specifically claimed ONS from the present invention. N.B. Sequences given in the disclosure of the present invention do not match in the the interpretation of the present invention of the present invention of the present invention of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:652.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 10.4; DB 1; Length 14; Pred. No. 95; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 14 BP; 2 A; 2 C; 8 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 17; Page 33; 252pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA03368 standard; DNA; 14 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0088501P.
98US-00093972.
98US-0088657P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 91.7%;
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 GGCGGCGCGAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGAGGGGGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-116433/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                39-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAA03368;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                isting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAA03368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33666666666666666666666888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠે
```

```
The present in the prevents, alleviates and/or inhibits adenosine—mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine A2a receptor agonist (Ia), or an oligonucleotide (I), containing less than 15¢ adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (1.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mNNA encoding the adenosine A1, A2a, A2b or A3 receptors, and segments of mNNA encoding the adenosine A1, A2a, A2b or A3 receptors, and (1b), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine compositions are used to prevent, alleviate and/or release and/or receptor-mediated cardiac, lung and/or renal damage or failure and/or (particularly where associated with ischaemia, toxin release and/or caministration of drugs or imaging agents, eg. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with acute inflammation. AAA02117, AAA02721 and AAA02723 to disponucleotides for use in the composition of the present invention. CAAA03718, AAA02722 and AAA03716 represent of the present invention. CAAA03718, AAA02722 and the exemplification of the composition of the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
present invention describes a pharmaceutical composition, comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine Ab receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:674.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 10.4; DB 1; Length 14; Pred. No. 95; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 14 BP; 3 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAA03390 standard; DNA; 14 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0088501P.
98US-00093972.
98US-0088657P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65.0%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 91.7 nes 11, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGCGGCCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGGCGGCAT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-116433/10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (EPIG-) EPIGENESIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nyce JW, Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA03390;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAA03390
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

Wed May 10 10:49:51 2006

Novel composition for treating or preventing e.g. cardiopulmonary and renal injury

Claim 17; Page 34; 252pp; English.

Triprocess of the prevents, alleviates and/or inhibits adenosine—mediated cardiopulmonary and/or renal damage and/or failure.

(1) is an adenosine A2a receptor agonist (1a), or an oligonucleotide denosine—mediated cardiopulmonary and/or renal damage and/or failure.

(1b), containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 receptors and segments of any appoint activity or A2a antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor—mediated cardiac, lung and/or renal damage or failure receptor—mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); alleviate e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); alleviate subsociated with administration of structs agents, particularly where such conditions are associated with acute inflammation. AAA02712, AAA02721 and AAA03723 to AAA03715 represent specifically claimed phosphorothioate antisense oligonucleotides for use in the composition of the present other composition. AAA02718, AAA02712, AAA03710 to AAA03710 to present other process of the present of the present of the present specifically contains and the exemplification of the present of the comprising The present invention describes a pharmaceutical composition, present invention

Sequence 14 BP; 2 A; 2 C; 8 G; 2 T; 0 U; 0 Other;

Gaps ö 65.0%; Score 10.4; DB 1; Length 14; 1; Indels Pred. No. 95; 0; Mismatches 91.7%; Best Local Similarity 91.7 Matches 11; Conservative Query Match

ö

ò

RESULT 65 AAF19153

AAF19153 standard; DNA; 14 BP.

AAF19153;

14-MAR-2001 (first entry)

Human adenosine Al receptor polynucleotide fragment #720.

respiratory obstruction, pulmonary obstruction, impeded respiration, surfactant hypoproduction, pulmonary vasoconstriction, asthma, RDS, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; Low adenosine antisense oligonucleotide; phosphorothioate; allergy; cancer; ss.

Homo sapiens.

WO200062736-A2.

26-OCT-2000

24-MAR-2000; 2000WO-US008020

99US-0127958P 06-APR-1999;

(UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.

Nyce JW;

WPI; 2000-679539/66

Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.

Claim 14; Page 117; 1592pp; English.

The present libration describes low adenosate (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antisflammatory, analgesic, immunosuppressive, antisathmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokine receptors, adhesion molecules and their receptors, cytokine and chemokine receptors, and peripheral nervous and non-nervous system creeptors, CNS and peripheral nervous and non-nervous system creeptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (sepecially pulmonary obstruction and/or lung inflammation, allergy (ies) and/or sulfactors entists syndrome (CC) and/or bronchoconstriction and mon-nervous syndrome surfactant hypoproduction which are associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated with a disease or condition selected from pulmonary associated pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polymucleotide fragments and antisense oligonucleotides used in the exemplification of hypertension, emphysema, chronic obstructive pulmonary disease (COPD) present invention describes low adenosine (A) content the present invention

Sequence 14 BP; 2 A; 2 C; 8 G; 2 T; 0 U; 0 Other;

Gaps ö 65.0%; Score 10.4; DB 1; Length 14; 91.7%; Pred. No. 95; ive 0; Mismatches 1; Indels 11; Conservative Query Match Best Local Similarity Matches

ö

2 GGCGGGCGCAT 13 2 GGAGGGCGGCAT 13 a ò

RESULT 66 AAF19131

AAF19131 standard; DNA; 14 BP.

AAF19131;

14-MAR-2001 (first entry)

Human adenosine Al receptor polynucleotide fragment #698.

human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; Low adenosine antisense oligonucleotide; phosphorothioate; allergy;

```
The present invention describes low admonstrate (A) connent annisement oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antilinflammatory, analgesic, immunosuppressive, antisthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokine and activating proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (NS) and peripheral nervous and non-nervous system cross and peripheral nervous and non-nervous system receptors, contral nervous and non-nervous system receptors, binding proteins, an analganacy associated proteins and antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction antisense oligonucleotides may be used in this way to treat disorders condition selected from pulmonary vasoconiated with a disease or condition selected from pulmonary vasoconiated with a disease or professional contraction transpiratory distracts syndromes and profession contraction including respiration frequence of the pulmonary obstruction and peripheral nervous and non-nervous standards and peripheral nervous and non-nervous standards and neaded from pulmonary vasoconiated with a disease or condition selected from pulmonary centraction, inflammation, and peripheral peri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bronchitis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (RDS), pain, cystic fibrosis (Cr), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD) pulmonary transplantation rejection, pulmonary infections, bronchitis and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     present invention describes low adenosine (A) content antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 10.4; DB 1; Length 14; Pred. No. 95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 14 BP; 3 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 14; Page 116; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABZ94825 standard; DNA; 14 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and respiratory obstructions.
                                                                                                                                                                                                                          24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                99US-0127958P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91.7%;
                                                                                                                                                                                                                                                                                                                                  EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGGGGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 11; Conser
                                                                                                                                                                                                                                                                                                                                (UYEC-) UNIV EAST
(NYCE/) NYCE J W.
                                                                                                                          WO200062736-A2
                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                06-APR-1999;
                                                                                                                                                                          26-OCT-2000
                          cancer; 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABZ94825;
                                                                                                                                                                                                                                                                                                                                                                                                             Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 67
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
```

```
The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligomuclectide antisense to the initiation codon, coding region, 5 or 3 end genomic flanking regions, 5 or 3 end genomic flanking regions, 5 or 3 end genomic flanking regions, 5 or regions within 2-10 muclectides of inactions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing levels of denosine or trinflammatory steroid in a subject, for reducing levels of denosine receptor, producing bronchodilation, increasing levels of biquinone or lung inflammation, lung allergies, or a respiratory disease or condition.

Content of the sequence data for this patent is not represented in the printed content in a subject of this patent is not represented in the printed content.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                         Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Indels
                                        Human adenosine Al receptor antisense fragment no.688.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 14 BP; 3 A; 2 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 10067; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 10.4; 1
Pred. No. 95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
                                                                                                                                                                                                                                                                                                                                                     23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                              24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           65.0%;
91.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                   (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABZ94847 standard; DNA; 14
17-OCT-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GGCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                    WO200285308-A2.
                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                             31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ubiquinone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABZ94847;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 68
ABZ94847
ID ABZ941
XX
AC ABZ941
XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
ठे
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
```

```
first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, and cytostatic, antiathmatic, hypotensive, communication may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject. for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine creeptor, producing prophylaction, increasing levels of ubiquinone or communication.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pharmaceutical composition for treating ailments associated with impaired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                              Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory; atteroid; ubiquinone; antiinflammatory; antiallergic; antisathmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invention relates to a novel pharmaceutical composition, which has a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ung surfactant in a subject's tissue, or treating bronchoconstriction,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pabalan J, Aguilar D;
                                            Human adenosine Al receptor antisense fragment no.710.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 14 BP; 2 A; 2 C; 8 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                              inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 10089; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ftp.wipo.int/pub/published pct sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sandrasagra A, K.
                                                                                                                                                                                                                                                                                                                                                                      23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                 24-APR-2001; 2001US-0286137P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (EPIG-) EPIGENESIS PHARM INC
  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Li Y,
                                                                                                                                                                                                                                                                               WO200285308-A2.
                                                                                                                                                                                                                                         domo sapiens
  17-OCT-2003
                                                                                                                                                                                                                                                                                                                         31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ubiquinone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nyce JW,
                                                                                                                                                                                              lung
```

```
ö
                                           Gaps
                                          ö
              65.0%; Score 10.4; DB 1; Length 14; ilarity 91.7%; Pred. No. 95; Conservative 0; Mismatches 1; Indels
                                                                2 GGCGGCGGCAT 13
Query Match
Best Local Similarity
```

ABD18695 standard; DNA; 14 BP. GGAGGGCGCCAT 13 RESULT 69 ABD18695 a

ABD18695;

(first entry) 29-JUL-2004

Human adenosine Al receptor oligonucleotide fragment 710.

Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distresses syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; bronchitis; pulmonary transplantation rejection; ds.

Homo sapiens

WO200285309-A2

31-OCT-2002

23-APR-2002; 2002WO-US013143.

24-APR-2001; 2001US-0286036P

(EPIG-) EPIGENESIS PHARM INC.

Aguilar D; Katz E, Pabalan J, Li Y, Sandrasagra A, Ke Tang L, Shahabuddin S; Miller S, Nyce JW,

WPI; 2003-093058/08.

oligonuclectide containing less percentage of adenosine, targeted toucleic acids associated with lung airway or lung dysfunction, and Pharmaceutical composition for treating asthma, has antisense bronchodilating agent.

Claim 15; SEQ ID NO 10089; 763pp; English.

This invention describes a novel composition (a) a lirst active agent, comprising oligonuclectides, effective for alleviating composition, respiratory tract inflammation, allergies and bronchoconstriction, respiratory tract inflammation, allergies and composition espoisate by the composition of hyposecretion, when administered to a mammal. The oligonuclectides are derived from a gene encoding or regulating cypression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonuclectides, (c) instructions for adding a carrier and for use of the kit. The composition of instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analyses; hypotensive, immunosuppressive and cytostatic activity, is a beta-adrentergic agonist. The composition is useful for preventing or composition carrier and is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The culmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, conflammation, allergies and/or surfactant hypoproduction are associated distress syndrome, pain, cystic fibrosis, allergic rhindis, pulmonary distress syndrome, pain, cystic fibrosis, allergic chinding rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleorides into products that free adenosine into products that free adenosine into products that free adenosine in the targ t free adenosine into the system tissue environment and thereby, to This invention describes a novel composition (a) a first active agent, e.g., lung, brain, heart, kidney, etc, prevent any unwanted effects due to it lung, brain,

Sequence 14 BP; 2 A; 2 C; 8 G; 2 T; 0 U; 0 Other;

ö Score 10.4; DB 1; Length 14; Pred. No. 95; 0; Mismatches 1; Indels Query Match
Best Local Similarity 91.7%;
Matches 11; Conservative

ö

Gaps

This invention describes a novel composition (a) a first active agent, comprising oligonuclectides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleorides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery constructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition composition or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The Human, antisense, bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respirator distress syndrome, pain, cystif fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary to Pharmaceutical composition for treating asthma, has antisense obligonucleotide containing less percentage of adenosine, targeted tuncleic acids associated with lung airway or lung dysfunction, and bronchodilating agent. Sandrasagra A, Katz E, Pabalan J, Aguilar D; obstruction, and/or bronchoconstriction and/or lung Human adenosine Al receptor oligonucleotide fragment 688. Claim 15; SEQ ID NO 10067; 763pp; English. 뗦. 23-APR-2002; 2002WO-US013143. 24-APR-2001; 2001US-0286036P (EPIG-) EPIGENESIS PHARM INC ABD18673 standard; DNA; 14 (first entry) 13 2 GGAGGGCGCAT 13 WPI; 2003-093058/08. Li Y, Sar Tang L, WO200285309-A2 Homo sapiens. 29-JUL-2004 31-OCT-2002 Miller S, ABD18673; pulmonary 3 RESULT 70 ABD1867 ð g

ö The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis, transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonuclectides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis; Gaps New antisense oligonucleotides used in treatment of, e.g. pulmonary ö DB 1; Length 14; 1; Indels Sequence 14 BP; 3 A; 2 C; 7 G; 2 T; 0 U; 0 Other; C/EBP-beta antisense oligonucleotide fragment. 0; Mismatches Score 10.4; I Pred. No. 95; Disclosure; Page 71; 120pp; English. BP. 65.0%; 91.7%; 98WO-US019419. 97US-0059160P. 98US-00093972. AAX55134 standard; DNA; 10 (UYEC-) UNIV EAST CAROLINA. 05-JUL-1999 (first entry) 11; Conservative 2 GGCGGCGGCAT 13 GGAGGCGCCAT 14 WPI; 1999-229400/19 prostate cancer; ss Query Match Best Local Similarity vasoconstriction 17-SEP-1998; WO9913886-A1 7-SEP-1997; 09-JUN-1998; 25-MAR-1999. Synthetic. AAX55134; Nyce JW; Matches RESULT 71 AAX55134/ 8888888888ð 셤

```
detecting effects on cholesterol influx or efflux in cells or using a catecting effects on cholesterol influx or efflux in cells or using a catecting effects on cholesterol influx or efflux in cells or using a catecting a cell with an agent to be tested for anti-intotic activity; and (2) detecting of the efflux of free cholesterol (FC) from the cell; where an increase in efflux of FC by the cell when contacted by the agent as compared to the cell under the agent. The method can be used for indicates antimitotic activity of the agent. The method can be used for indicates antimitotic activity of the agent. The method can be used for indicates antimitotic activity of the agent. The method can be used for indicates antimitotic activity of the agent. The method can be used for cells, more particularly the growth and proliferation of calls, more particularly the growth and proliferation of cancer cells, other transformed cells, or at other sites such as in actic transplant subjects to restenosis. It can also be used for modulating cholesterol uptake in atherosclerosis and heart disease. It can also be used for detecting lipid processing by cells in pathologies such as diabetes, thyroid hormone deficiency, renal failure and inherited hyperlipidaemias.
                                                                                                                                                                                                                                                                                               ö
acute asthma, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LDL receptor; low density lipoprotein; steroid receptor element; caveolin; SRE; regulation; cell cycle; cholesterol; mitosis; cell division; anti-mitotic; inhibition; growth; proliferation; cancer; restenosis; atherosclerosis; heart disease; detection; lipid processing; diabetes; thyroid hormone deficiency; renal failure;
                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Detection of anti-mitotic agents for use in inhibiting the growth or
                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                  DB 1; Length 10;
                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 proliferation of cells, e.g. in cancers or restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human caveolin promoter Sp1-like binding sequence.
                                                                                                                                                                                                  Sequence 10 BP; 0 A; 7 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                Score 10;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inherited hyperlipidaemia; probe; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 5; Page 93; 135pp; English.
                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA221077 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                62.5%; ; 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US005146.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0077351P.
                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.0
....hes 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-NOV-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fielding CJ, Fielding PE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                                      ።
                                                                                                                                                                                                                                                                                                                                                          10 660666660 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-551504/46.
                                                                                                                                                                                                                                                                                                                                    2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9946592-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAZ21077;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ21077
    8888888888888
                                                                                                                                                                                                                                                                                                                                                                          용
                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCCCCCCCCCCCX8XL1XX8X1X8X6X6X6X6X6X8X8X8X8X8X8X8X8X
```

```
The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets concleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airway, including lung diseases and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, injects afflict the lungs of a subject. They can be used for treating c.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, confineded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive coursenows, and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the CONs reduces side effects. The A-contening ONs break down with the clease of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
                                                                                                                                                 ö
The present sequence represents a human caveolin promoter sequence used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiathmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human adenosine receptor related polynucleotide SEQ ID NO:2270.
                                                                                                        Score 10; DB 1; Length 10;
                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                 ö
                                                            Sequence 10 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                  100.08; Pred. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 549; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                  AAA34581 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0095212P.
                                                                                                     62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                          10; Conservative
                                                                                                                                                                                                                             10
                                                                                                                                                                                      GGCGGCGGC 11
                                                                                                                                                                                                                               2002000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-205971/18.
                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                   28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                            AAA34581;
                                                                                                 Query Match
Best Local {
                                                                                                                                                                                      N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce JW;
                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                         RESULT 73
                                                                                                                                                                                                                                                                                                                 AAA34581
88333
                                                                                                                                                                                                                          셤
                                                                                                                                                                                      8
```

ö nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2015, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA31231 to AAA31992) are specifically claimed ONS from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions. Low adenosine antisense oligonucleotide, phosphorothioate, allergy, human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory, bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pain; cystic fibrosis; allergic rhinitis; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antinflammatory, analgesic, immunosuppressive, antisthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, Gaps ö DB 1; Length 10; 73; Indels ö Sequence 10 BP; 0 A; 7 C; 3 G; 0 T; 0 U; 0 Other; Pred. No. 73; 0; Mismatches Human C/EBP polynucleotide fragment #2270. 62.5%; Score 10; Claim 14; Page 265; 1592pp; English. AAF20703 standard; DNA; 10 BP. 100.0%; 24-MAR-2000; 2000WO-US008020 99US-0127958P EAST CAROLINA. (first entry) Local Similarity 100. 2 GGCGGGCGGC 11 WPI; 2000-679539/66. 10 GCCGGCCGC WO200062736-A2. UYEC-) UNIV NYCE Homo sapiens 06-APR-1999; 14-MAR-2001 26-OCT-2000 cancer; ss. AAF20703; Query Match Nyce JW; (NYCE/) listing AAF20703/c Matches RESULT 74 8888888888888 셤 à

chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, bradkinin receptors, contral cereptors, page and non-nervous system (CNS) and peripheral nervous and non-nervous system peripheral nervous nervous system peripheral nervous ne ö perecting colorectal cancer in a subject, involves detecting macrophage inhibitory cytokine or renal dipeptidase or their mRNA in feces or blood of the subject. The invention relates to detecting CC (colorectal cancer e.g. colorectal adenoma). comprising: (a) detecting macrophage inhibitory cytokine (MIC) or renal dipeptidase (RDP) in facetes or blood of a subject and comparing amount of MIC or RDP detected to that in normal subjects, where an Gaps Colorectal cancer, colorectal adenoma; ss; human; renal dipeptidase; macrophage inhibitory cytokine; MIC; RDP; faeces; blood; cvtokines and DNA tag from human transcript repressed in adenomas/cancers #241. ; Score 10; DB 1; Length 10; Pred. No. 73; 0; Indels receptors, Sequence 10 BP; 0 A; 7 C; 3 G; 0 T; 0 U; 0 Other; 100.0%; Prec. ... (UYJO) UNIV JOHNS HOPKINS SCHOOL MEDICINE. Buckhaults P, Kinzler KW, Vogelstein B; immunoglobuling and antibodies, antibody Disclosure, Page 33; 59pp; English. ACA94708 standard; DNA; 10 BP. 09-SEP-2002; 2002WO-US028518. 07-SEP-2001; 2001US-0317494P. 30-MAY-2002; 2002US-0383805P. 62.5%; 18-JUL-2003 (first entry) 10; Conservative kidney proximal tubule. GGCGGGCGGC 11 10 GGCGGGCGGC 1 the present invention WPI; 2003-313220/30. Local Similarity WO2003022863-A1. Homo sapiens. 20-MAR-2003. ACA94708; N Query Match Matches RESULT 75 ACA94708/ \$ ò 셤

62.5%; Score 10; DB 1; Length 10; 100.0%; Pred. No. 73; 0; Indels repressed in colorectal cancer or colorectal adenoma Sequence 10 BP; 0 A; 6 C; 3 G; 1 T; 0 U; 0 Other; 0; Mismatches Human C/EBP antisense fragment no.2257. ABZ96397 standard; DNA; 10 BP. 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P. (EPIG-) EPIGENESIS PHARM INC 17-OCT-2003 (first entry) Query Match 62.5 Best Local Similarity 100. Matches 10; Conservative 3 GCGGCCGCA 12 10 GCGGCGCCA 1 WO200285308-A2. Homo sapiens. 31-OCT-2002 ABZ96397; RESULT 76 ABZ96397, g ઠે

cc subject; (b) isolating mRNA sample from faeces of a subject, detecting MIC or RDP mRNA in the mRNA sample, and comparing amount of MIC or RDP mRNA in the mRNA sample, and comparing amount of MIC or RDP mRNA detected to that in normal subjects, where an elevated amount of MIC or RDP corrected to that in normal subjects, where an elevated amount of MIC or RDP mRNA in the mRNA sample, and comparing the amount of MIC or RDP mRNA in the mRNA sample to amounts of MIC or RDP mRNA in the mRNA sample to amounts of MIC or RDP mRNA in normal subjects, where can elevated amount of MIC or RDP mRNA in the mRNA sample is an indicative of Cc in the subject; (d) contacting blood or faeces of a subject, with an elevated amount of MIC or RDP mRNA in the mRNA sample is an indicative of Cc in the subject; (d) contacting blood or faeces of a subject, with comparing the amount of activity of RDP in the blood or faeces by detection product or decreased RDP substrate, and comparing the amount of activity of RDP in blood or faeces of the subject to that in normal subjects, where an elevated amount of activity of RDP in the blood or faeces of the subject in the blood or faeces of the subject is an indicator of Cc in the subject; (e) administering to a subject an antibody which specifically binds the moiety in the subject is an indicator of Cc in the subject and detecting the moiety in the subject from outside of the subject and area of localisation of the moiety within the subject but outside the proximal tubules of the kidney identifies Cc; or (f) administering to a subject as a subject as a subject and comparing the moiety in the subject as being labeled with a detectable moiety is latestable moiety in product or RDP subject as subject, and detectable moiety, isolating faeces or blood from the subject, and detectable moiety, isolating faeces or blood from the subject, and detectable moiety, the subject as the subject or RDP subject or RDP with the detectable moiety, where in the subject or RDP with the subject or RDP with the subjec with the detectable moiety, where increased product or decreased substrate in the faeces or blood indicates CC in the subject. The methods are useful for detecting colorectal cancer in a subject. The present sequence is a DNA tag derived from a human transcript whose expression is

0; Gaps

ö

Human; antisense; lung dysfunction; nasal airway dysfunction; antinflammatory steroid; ubiquinone; antinflammatory; antiallergic; antiathmatic; Pypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.

Li Y, Sandrasagra A, Katz E, Pabalan J, Aguilar D; Tang L, Shahabuddin S; Nyce JW, Miller S,

WPI; 2003-229219/22

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or ubiquinone.

Disclosure; SEQ ID NO 11639; 872pp; English.

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the intiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or masal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a cuse in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antisinflammatory steroid in a subject, for reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or complianmantion, lung allergies, or a respiratory disease or condition, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIDO cut fits wipo.int/pub/published_pct_sequences

Sequence 10 BP; 0 A; 7 C; 3 G; 0 T; 0 U; 0 Other;

Gaps ; 0 62.5%; Score 10; DB 1; Length 10; 0; Indels 100.0%; Pred. No. 73; ive 0; Mismatches Local Similarity 100. es 10; Conservative Query Match

ö

2 GCCGCCCGC 11 10 GGCGGGCGGC 8 d

Human C/EBPN DNA fragment 2257. ABD20306 standard; DNA; 10 BP. 29-JUL-2004 (first entry) ABD20306; RESULT 77 ABD20306/

Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distresse syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; bronchitis; pulmonary transplantation rejection; ds.

Homo sapiens.

31-OCT-2002.

WO200285309-A2.

23-APR-2002; 2002WO-US013143. 24-APR-2001; 2001US-0286036P.

(EPIG-) EPIGENESIS PHARM INC.

```
This interior describes a noter composition, and attitude agent, composition of agent, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and bronchoconstriction, respiratory tract inflammation, allergies and bronchoconstriction or hyposecretion, when administered to a mammal. The surfactant depletion or hyposecretion, when administered to a mammal. The coligonucleotides are derived from a gene encoding or regulating of strength polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery of the invention also describes a kit, that comprises: (b) a delivery of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition are reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respirator, distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acthma; allergy asthma; imped respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; pulmonary disease; leukemia; lymphoma; carcinoma; obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                   invention describes a novel composition (a) a first active agent,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                      Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and
  Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62.5%; Score 10; DB 1; Length 10; 100.0%; Pred. No. 73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
Katz E, Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 0 A; 7 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C/EBP-beta antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                    Claim 15; SEQ ID NO 11639; 763pp; English.
i Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAX55133 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 100.
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGCGGGCGGC 11
                                                                                                                                                                                                    bronchodilating agent.
                                                                         WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 GGCGGGCGGC
Li Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUL-1999
Nyce JW,
Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX55133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX55133,
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

```
incoding regions at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, colon cancers such as letemias at the carcinomas end of secondary cancer, pancreatic cancer, breast cancer, lung cancer, melanoma, heaptic metastass, as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specification describes antisense oligonucleotides (AAX52869-X55271)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphyseme; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                    antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; adenosine receptor; low adenosine antisense oligonucleotide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human adenosine receptor related polynucleotide SEQ ID NO:2269.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1; Length 11;
83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 11 BP; 0 A; 8 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62.5%; Score 10; DB 100.0%; Pred. No. 83; Live 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure, Page 71; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAA34580 standard; DNA; 11 BP
                                                                                                                                                             98WO-US019419
                                                                                                                                                                                                     97US-0059160P
                                                                                                                                                                                                                        98US-00093972
                                                                                                                                                                                                                                                              (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 Gecegeceec 2
prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                            WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                       vasoconstriction.
                                                                             WO9913886-A1
                                                                                                                                                             17-SEP-1998;
                                                                                                                                                                                                     17-SEP-1997;
                                                                                                                                                                                                                          09-JUN-1998;
                                                                                                                     25-MAR-1999
                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA34580;
                                                                                                                                                                                                                                                                                                      Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAA34580/
  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

```
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                           The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets coligonuclectide (ON) with low adenosine (up to 15%), which targets mucleic acids involved in bronchoconstriction, allergies, and/or conflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, captulasthmatic, cytostatic and analgesic activities. The compositions are effects afflict the lungs of a subject. They can be used for treating effects afflict the lungs of a subject. They can be used for treating conspiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive culmposated respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive culmposated cancer. The reduction of the adenosine content of the correspond concerns which may metastasise to the lungs, including carcinomas, and cancers which may metastasise to the lungs, including convents and prostate cancer. The reduction of the adenosine content of the convent of the activates adenosine receptors causing convents. The A-containing ONS break down with the convent of the sequences are also called SEQ ID NO:1 to 2815, and then the last 185 content on the previously mamed sequences. SEQ ID NO:1 to 1885, but the sequences differ from the previously amend sequences. SEQ ID NO:1 to 1885, and the previously content of the present invention. Not the previously amend sequences of the present invention. Not the previously mamed sequences of the present invention. Not the previously mamed sequences of the present invention of match convent of the present invention of the previously mamed sequences of the present invention of the previous of the previous of the present invention of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
                                                                                                                                                                                                                                                                            New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62.5%; Score 10; DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 11 BP; 0 A; 8 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human C/EBP polynucleotide fragment #2269.
                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 549; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF20702 standard; DNA; 11 BP.
                                                                                                                       99WO-US017712
                                                                                                                                                     98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.08;
                                                                                                                                                                                 (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 100.
1es 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                                                                                                                                                                                                                               WPI; 2000-205971/18.
                                                           WO200009525-A2.
                              Homo sapiens
                                                                                                                                                  03-AUG-1998;
                                                                                                                       03-AUG-1999;
                                                                                         24-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF20702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                  Nyce JW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               isting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF20702,
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                # X B X B X B X B X B
```

```
The present invention town townstrong them. In the antisense oligonucleotides and compositions (1) computed them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (C. I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (1) can be used to down-regulate the expression and or activity of target polypeptides associated with cumy/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, andogenously produced specific and non-specific enzymes, chemokines, andesion molecules and their receptors, creaming the chemokine receptors, adenosine receptors, bradykinin receptors, central creceptors, and peripheral nervous and non-nervous system creeptors, binding proteins and malignancy associated proteins. The creeptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction which are associated with a disease or condition and from will manary in flammation inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; PBS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention describes low adenosine (A) content antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62.5%; Score 10; DB 1; Length 11; 100.0%; Pred. No. 83; 0; Indels tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 11 BP; 0 A; 8 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 14; Page 265; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYEC-) UNIV EAST (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-OCT-2000
                                                                                                                                                                                                                                                                                                                    cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loca
Matches
```

11 GGCGGGCGC

ngs20.res

ABD20305 standard; DNA; 11 BP.

ABD20305;

first active agent comprising an oligonuclectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nuclectides of junctions of genee encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an natisinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antialexglo, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine or receptor, producing prohibidition, increasing levels of ubiquinone or increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO Pharmaceutical composition for treating ailments associated with impaired Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiinsthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. The invention relates to a novel pharmaceutical composition, which has a respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or Katz E, Pabalan J, Aguilar D; Sequence 11 BP; 0 A; 8 C; 3 G; 0 T; 0 U; 0 Other; Disclosure; SEQ ID NO 11638; 872pp; English ftp.wipo.int/pub/published_pct_sequences Human C/EBP antisense fragment no.2256. Sandrasagra A, Ka L, Shahabuddin S; ABZ96396 standard; DNA; 11 BP. 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P. (EPIG-) EPIGENESIS PHARM INC. (first entry) Li Y, Sar Tang L, WPI; 2003-229219/22. WO200285308-A2. Homo sapiens. 17-OCT-2003 31-OCT-2002 Nyce JW, I Miller S, ubiquinone ABZ96396; ABZ96396/

```
ö
                                Gaps
                                ;
0
           DB 1; Length 11;
83;
                               0; Indels
                               0; Mismatches
           62.5%; Score 10; 100.0%; Pred. No.
Ouery Match
Best Local Similarity 100...
Best Local 10, Conservative
                                                     GGCGGGCGGC 11
                                                                        11 Gecedecec 2
                                                     N
```

ઠે g

This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic. with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonuclectides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to Human, antisense, bronchoconstriction, allergy, hyposecretion, pain, respiratory tract inflammation, adenosine sensitivity, lung, cancer, surfactant depletion, antiallergic, antiinflammatory; antiasthmatic, analgesic, hypotensive, immunosuppressive, cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease, pulmonary vasoconstriction, respiratory distress syndrome, allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated t 0 Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and Katz E, Pabalan J, Aguilar D; Claim 15; SEQ ID NO 11638; 763pp; English. pulmonary transplantation rejection; ds Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; Human C/EBPN DNA fragment 2256 23-APR-2002; 2002WO-US013143. 24-APR-2001; 2001US-0286036P. (EPIG-) EPIGENESIS PHARM INC 29-JUL-2004 (first entry) bronchodilating agent. WPI; 2003-093058/08. WO200285309-A2. Homo sapiens. 31-OCT-2002. Miller S, 3 Nyce

ន្តដូល

ò 셤

```
AAZ2107
     ស្ត្រស្ត្ន
                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, respiratory acute asthma, allergies, asthma, impeded respiration, respiratory pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary ciseases (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancreatic cancer,
                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New antisense oligonucleotides used in treatment of, e.g. pulmonary vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                           Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease;
                                                                                                                   ö
                                                                         62.5%; Score 10; DB 1; Length 11; 100.0%; Pred. No. 83; 0; Indels ive 0; Mismatches 0; Indels
                                                                                                                 0; Indels
                                   Sequence 11 BP; 0 A; 8 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                     C/EBP-beta antisense oligonucleotide fragment.
prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 71; 120pp; English.
                                                                                                                                                                                                                                                                                  AAX55132 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-0059160P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYEC-) UNIV EAST CAROLINA.
                                                           Query Match
Best Local Similarity 100.0
Warches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                05-JUL-1999 (first entry)
                                                                                                                                                     1
                                                                                                                                                                                         ~
                                                                                                                                                                                     11 GGCGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      prostate cancer; ss.
                                                                                                                                                   2 GGGGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                            AAX55132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nyce JW;
                                                                                                                                                                                                                                                                  AAX55132/
```

```
A method has been developed for identifying anti-mitotic agents by detecting effects on cholesterol influx or efflux in cells or using a caveolin promoter-reporter gene construct. The method comprises: (1) contacting a cell with an agent to be tested for anti-mitotic activity; and (2) detecting of the efflux of free cholesterol (FC) from the cell; where an increase in efflux of FC by the cell when contacted by the agent indicates antimitotic activity of the agent. The method can be used for identifying agents for inhibiting the growth and/or proliferation of cells, more particularly the growth and proliferation of cancer cells, other transformed cells, or at other sites such as in aortic transplant subjects to restenosis. It can also be used for modulating cholesterol uptake in atherosclerosis and heart disease. It can also be used for detecting light processing by cells in pathologies such as diabetes, thyroid hormone deficiency, renal failure and inherited hyperlipidaemias. The present sequence represents a human caveolin promoter sequence used in the exemplification of the present invention
                                                                                                                                                                                                                                                                  ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LDL receptor; low density lipoprotein; steroid receptor element; caveolin; SRB; regulation; cell cycle; cholesterol; mitosis; call division; anti-mitotic; inhibition; growth; proliferation; cancer; restenosis; atherosclerosis; heart disease; detection; lipid processing; diabetes; thyroid hormone deficiency; renal failure; inhide hyperlipidaemia; probe; ss.
          hepatic metastases, a or have metastasized
                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Detection of anti-mitotic agents for use in inhibiting the growth or
                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                               DB 1; Length 12;
94;
                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          proliferation of cells, e.g. in cancers or restenosis.
hepatocellular carcinoma, kidney cancer, melanoma, well as all types of cancers which may metastasize to the lungs, including breast and prostate cancer
                                                                                                                               Sequence 12 BP; 0 A; 8 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 12 BP; 0 A; 3 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                        62.5%; Scc...
100.0%; Pred. No...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 5; Page 93; 135pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human caveolin promoter sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US005146.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0077351P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ21076 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fielding CJ, Fielding PE;
                                                                                                                                                                        Ouery Match
Best Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (REGC ) UNIV CALIFORNIA.
                                                                                                                                                                                                                                                                                                                            2 GGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                        e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-551504/46.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9946592-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAZ21076;
                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 84
```

```
The present lime threating a new composition conjugating an autisense oligonucleotide (ON) with low adenosine (up to 154), which targets nucleic acids involved in bronchoconstriction, allegies, and/or inflammation. The ON can have antiinflammatory, antiallergic.

Inflammation. The ON can have antiinflammatory, antiallergic, and/or antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary of fects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the concentration and inflammation. AAA33313 to AAA33312 represent the nucleotide sequences given in the sequence listing from the present contenton, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1860 (AAA33233 to AAA33992) are specifically claimed ONs from the present invention. N.B.
                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 present invention describes a new composition comprising an antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatrory; antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                        Human adenosine receptor related polynucleotide SEQ ID NO:1682.
62.5%; Score 10; DB 1; Length 12; 100.0%; Pred. No. 94; o; Mismatches 0; Indels ive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 473; 1343pp; English.
                                                                                                                                                                                                                                                  AAA33993 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0095212P
  62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                           (first entry)
Query Match 62.5
Best Local Similarity 100.
Matches 10; Conservative
                                                                                                                                   12
                                                                                           2 GGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-205971/18.
                                                                                                                                     3 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ното варіепв.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                           28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-FEB-2000
                                                                                                                                                                                                                                                                                              AAA33993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nyce JW;
                                                                                                                                                                                                       RESULT 85
                                                                                                                                                                                                                                 AAA33993,
                                                                                                                                                                                                                                                         ò
                                                                                                                                   g
```

```
The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or antiasthmation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung diseases and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-contenting ONs break down with the release of deoxyadenosine which activates adenosine receptors causing
                                                                                                                                                               ô
Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human, adenosine receptor; low adenosine antisense oligonucleotide, phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human adenosine receptor related polynucleotide SEQ ID NO:2268.
                                                                                                                   Score 10; DB 1; Length 12;
Pred. No. 94;
                                                                                                                                                               0; Indels
                                                                               Sequence 12 BP; 0 A; 7 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                               100.0%; Pred. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Page 549; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                            AAA34579 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0095212P.
                                                                                                                       62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUL-2000 (first entry)
                                                                                                                                          Local Similarity 100.
hes 10; Conservative
                                                                                                                                                                                                    2 GGCGGGCGC 11
                                                                                                                                                                                                                                          GGCGGGCGGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                                    AAA34579;
                                                                                                                                                                                                                                            10
                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cancers.
                                         listing
                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                        AAA34579,
                                                                                                                                                                                                                                                                                                                                               889938
                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                          셤
```

```
nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32313 to AAA3392) are specifically claimed ONs from the present invention. N. B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
  bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human; airway disorder; bronchoconstruction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; immeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and
                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Low adenosine antisense oligonucleotide; phosphorothioate; allergy;
                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                          62.5%; Score 10; DB 1; Length 12; 100.0%; Pred. No. 94; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatch control molecule MM2 oligonucleotide #1682.
                                                                                                                                                                                                     Sequence 12 BP; 0 A; 8 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 14; Page 539; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF20115 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                      10; Conservative
                                                                                                                                                                                                                                                                                                                             2 GGCGGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UYEC-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF20115;
                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nyce JW;
                                                                                                                                                               listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF20115/c
                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 87
888888888888888
                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                 g
```

```
immunoglobulins and antibodies, arceptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokines, endogenously produced specific and non-specific enzymes, chemokines, endogenously produced specific and non-specific enzymes, chands and antibody receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central crowns system (CNS) and peripheral nervous and non-nervous system peptides nervous system peptides are creeptors. CNS and peripheral nervous and non-nervous system peptides transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy its) and/or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory discress syndrome (RDS), pain, cystic fibrosis (CP), allergic thinitis (AR), pulmonary communication, emphysema, chronic obstructive pulmonary disease (CPD), when the condition are peripheral conditions to the condition and conditions are conditions and conditions emphysema, chronic obstructive pulmonary disease (CPD), when the conditions are conditions and conditions are conditions and conditions and conditions are conditions and conditions and conditions are conditions and conditions are conditions and conditions and conditions are conditions and conditions are conditions and conditions and conditions are conditions and conditions are conditions and conditions are conditions and conditions and conditions are conditions and conditions are conditions and conditions and conditions are conditions and conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; respiratory thypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1; Length 12; 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 12 BP; 0 A; 7 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                62.5%; Scor.
100.0%; Pred. No. >-,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human C/EBP polynucleotide fragment #2268.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     )701/c
AAF20701 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0127958P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10 GGCGGCCGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF20701;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

ò 셤 The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodiator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with certified peptide factors and malignancies, such as stimulating and certivating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokine receptors, adenosine receptors, cytokines and chemokine receptors, adenosine receptors, bradykinin receptors, central creceptors, adenosine receptors, bradykinin receptors, central creceptors, binding proteins and melignancy associated proteins. The creceptors, binding proteins and malignancy associated proteins. The creceptors, binding proteins and malignancy associated proteins. The creceptors binding respiratory obstruction (especially pulmonary obstruction) and/or lung inflammation, allergy(les) and/or condition and/or lung inflammation, allergy(les) and/or condition and protein with a disease or condition and protein which are associated with a disease or conditions. ö antiinflammatory steroid, ubiquinone, antiinflammatory; antiallergic, antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplanteation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary Gaps .; 0 Human; antisense; lung dysfunction; nasal airway dysfunction; DB 1; Length 12; 94; 0; Indels Sequence 12 BP; 0 A; 8 C; 4 G; 0 T; 0 U; 0 Other; 0; Mismatches 62.5%; Score 10; 100.0%; Pred. No. Human C/EBP antisense fragment no.2255. Claim 14; Page 265; 1592pp; English. ВЪ. and respiratory obstructions, 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P. (EPIG-) EPIGENESIS PHARM INC Query Match Best Local Similarity 100.vv ABZ96395 standard; DNA; 12 (first entry) 11 12 GCCGGCCGC 3 the present invention 2 GGCGGGCGGC WO200285308-A2. 17-0CT-2003 31-OCT-2002 ABZ96395; Homo ABZ96395, 요 ò

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the intiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or masal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, cuse in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition may have a use in antisense year therapy. The composition may have a use in antisense year therapy. The composition is useful for treating or preventing a respiratory, lung or mallignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an entilistmanmatory seroid in a subject, for reducing or depleting levels of of, or reducing bronchodilation, increasing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung suffactant in a subject is tissue, or treating bronchoconstriction, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed per the ming in the printed in electronic format directly from WIPO Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; Gaps Aguilar D; ; Score 10; DB 1; Length 12; Pred. No. 94; 0; Indels Pabalan J, Sequence 12 BP; 0 A; 8 C; 4 G; 0 T; 0 U; 0 Other; Disclosure; SEQ ID NO 11637; 872pp; English. at ftp.wipo.int/pub/published_pct_sequences 100.0%; Prec. ... lung inflammation; respiratory disease; ds. Katz E, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; ABZ95809 standard; DNA; 12 BP. 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P. 62.5%; (EPIG-) EPIGENESIS PHARM INC Human nucleic acid sequence. 17-OCT-2003 (first entry) Local Similarity 100. hes 10; Conservative 2 GGCGGGCGGC 11 12 GGCGGGCGGC 3 WPI; 2003-229219/22. WO200285308-A2. Homo sapiens, 31-OCT-2002. Nyce JW, I Miller S, ubiquinone ABZ95809; Query Match Matches RESULT 90 ABZ95809,

Wed May 10 10:49:51 2006

```
first active agent comprising an oligonucleotide antisers to the initiation condon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or masal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, and cytostatic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of enemesine contraction, and the composition, and the composition is used to be condition or depleting levels of encember of the composition in a subject, for reducing levels of edenosine or limit and account of the composition or depleting levels of encember of the composition or depleting levels of encember of the composition or depleting levels of limit and account of the composition or depleting levels of encember of the composition or contraction or limit and composition or depleting levels of encember of the composition or contraction or contraction or limit and composition or depleting levels of encember of the composition or contraction or contraction
                                                                                                                                                                                                                                          Pharmaceutical composition for treating ailments associated with impaired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lung inflammation, lung allergies, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention relates to a novel pharmaceutical composition, which has a
                                                                                                                                                                                                                                                                                         respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                               Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12 BP; 0 A; 7 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; SEQ ID NO 11051; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ftp.wipo.int/pub/published_pct_sequences
                                  Li Y, Sandrasagra A, Katz E,
Tang L, Shahabuddin S;
                                                                                                                                                                    WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                                                                                                            ubiquinone
                                                                              Miller S,
                                           Nyce JW,
```

Gaps ö DB 1; Length 12; 94; 0; Indels ; Pred. No. 94; 0; Mismatches 62.5%; Score 10; 100.08; Query Match
Best Local Similarity 100. 2 GGCGGGCGGC 11 10 GGCGGGCGGC 1 a ઠ

ö

ABD20392 standard; DNA; 12 BP. (first entry) 29-JUL-2004 ABD20392; RESULT 91 ABD20392/

Human pulmonary and inflammatory target DNA #3.

beta adrenergic agonist, respiratory disease; pulmonary vasoconstriction, respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; pulmonary transplantation rejection; ds

Homo sapiens

WO200285309-A2.

31-OCT-2002

23-APR-2002; 2002WO-US013143

24-APR-2001; 2001US-0286036P

```
(EPIG-) EPIGENESIS PHARM INC.
```

ä Pabalan J, Aguilar Sandrasagra A, Katz E, Li Y, Sar Tang L, Miller S, Nyce JW,

WPI; 2003-093058/08

Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and bronchodilating agent.

Claim 15; SEQ ID NO 11052; 763pp; English.

Compositions of the composition of the transport of the composition of the contract depletion or hyposecretion, when administered to a mammal. The culticated depletion or hyposecretion, when administered to a mammal. The culticated depletion or hyposecretion, when administered to a mammal. The culticated depletion or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery of the invention also describes a kit, that comprises: (a) a delivery of instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiastmatic, of the invention as useful for preventing or treating a respiratory, lung or malgesia to require of the production of treating a respiratory, lung or malignant disease. The administered composition conprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The composition and/or lung contraction an inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to This invention describes a novel composition (a) a first active agent, e.g., lung, brain, heart, kidney, etc, prevent any unwanted effects due to it

Sequence 12 BP; 0 A; 7 C; 4 G; 1 T; 0 U; 0 Other;

Gape ô Score 10; DB 1; Length 12; Pred. No. 94; 0; Indels 100.0%; Pred. No. 94; ive 0; Mismatches 62.5%; Best Local Similarity 100. Matches 10; Conservative Query Match

ö

11 2 GGCGGGCGGC

ઠે

ABD20304 standard; DNA; 12 29-JUL-2004 (first entry) ABD20304; RESULT 92 ABD20304/

BP.

Human C/EBPN DNA fragment 2255.

Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension;

54

```
AAX55131;
  This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating construction, respiratory tract intlammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, curfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dystunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vascocnstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pan, cystic fibrosis, allergies pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligons corresponding to the ranger RNA serves to prevent the breakdown of the unsarial, and the ranger RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system of the anti-sense and the present in the target RNA serves to prevent and thereby, to the reduced adenosine soligon-tended respiratory and the oligonucleotides into products that the prevent 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ô
emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted to nucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                             Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62.5%; Score 10; DB 1; Length 12; 100.0%; Pred. No. 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                           Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 12 BP; 0 A; 8 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 15; SEQ ID NO 11637; 763pp; English.
                                                                                                                                                                                                                                                                                                                                             Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                           Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                      23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.08;
                                                                                                                                                                                                                                                   24-APR-2001; 2001US-0286036P.
                                                                                                                                                                                                                                                                                                (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bronchodilating agent
                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-093058/08.
                                                                                                               WO200285309-A2.
                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                        Nyce JW, Li
Miller S, 7
                                                                                                                                                            31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
```

```
the specification describes antisense oligonucleotides (AAX52869-X55271)
directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, gene initiation
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
end and the juxta-section between coding and non-coding regions and all
segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
conditions or mixtures. The antisense treatment of
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
acute asthma, allergies, asthma, impeded respiration, respiratory
culmonary vasoconstriction, emphysema, chronic obstructive pulmonary
disease (CODD), and cancers such as leukemias, lymphomas, carcinomas e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                                          Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic me
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62.5%; Score 10; DB 1; Length 13; 100.0%; Pred. No. 1.1e+02; iive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 13 BP; 0 A; 9 C; 4 G; 0 T; 0 U; 0 Other;
                                                                          C/EBP-beta antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 71; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62.5.,
100.0%; Pre-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYEC-) UNIV EAST CAROLINA.
05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-SEP-1997;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

AAA34578/c RESULT 94

AAX55131 standard; DNA; 13 BP.

AAX55131/c ID AAX551: XX

RESULT 93

2 GCCGGCCGC 11

ò

m

12 GGCGGGCGC

AAA34578 standard; DNA; 13

AAA34578

28-JUL-2000

(first entry)

Human adenosine receptor related polynucleotide SEQ ID NO:2267.

Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorochioate; impaired respiration; inflammation; allergy; allergy; disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.

Homo sapiens.

40200009525-A2

24-FEB-2000

99WO-US017712. 03-AUG-1999; 98US-0095212P. 03-AUG-1998;

(UYEC-) UNIV EAST CAROLINA.

Nyce JW;

WPI; 2000-205971/18.

New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or

Disclosure; Page 549; 1343pp; English.

The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or nucleic acids involved in bronchoconstriction, allergies, and/or antisathmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung diseases whose secondary of e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, ceffects afflict the lungs of a subject. They can be used for treating c.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, furnoic obstructive c.g. timpeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including correlate and prostate cancer. The reduction of the adenosine content of the CONs reduces side effects. The A-containing ONS break down with the relaces of deoxyadenosine which activates adenosine receptors causing concloconstriction and inflammation. AAA33312 represent the nucleotide sequences given in the sequence listing from the present correspond to SEQ ID NO:11 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 185, and then the last 185 from the previously named sequences. SEQ ID NO:11 to 185, and then the lact of the morent in the disclosure of the present invention do not match convertion.

CAAA3392D are specifically claimed ONS trom the present invention do not match convertion. listing

Sequence 13 BP; 0 A; 9 C; 4 G; 0 T; 0 U; 0 Other;

Gaps ; DB 1; Length 13; 1.1e+02; Indels ; 0 62.5%; Score 10; DB 100.0%; Pred. No. 1.1 ive 0; Mismatches Query Match Best Local Similarity 100.0 Matches 10; Conservative

ö

셤

RESULT 95

AAF20700,

AAF20700 standard; DNA; 13 BP

AAF20700;

(first entry) 14-MAR-2001 Human C/EBP polynucleotide fragment #2267.

Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; eurfactant depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; cancer; ss.

Homo sapiens.

WO200062736-A2.

26-OCT-2000.

24-MAR-2000; 2000WO-US008020.

99US-0127958P.

06-APR-1999;

(UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.

Nyce JW;

WPI; 2000-679539/66.

Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions

Claim 14; Page 265; 1592pp; English.

The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (C) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. (The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with carporating peptide factors and transmitters, transcription factors, immunoglobuline and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, immunoglobuline and antibodies antibody receptors, cytokines and chemokine receptors, adenosine receptors, brinding proteins, adenosine receptors, brinding proteins, adenosine receptors, brinding proteins, adenosine receptors, brinding proteins and malianancy associated proteins. The receptors of the corporation and malianancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergies and and/or bronchoconstriction which are associated with a disease or conditions elected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (FP), allergic rhinitis (AR), pulmonary disease (CDPD), hypertension, emphysema, chronic obstructive pulmonary disease

```
4 CGGCGGCGG 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 98
                                          RESULT 97
                                                                                                                                                                                                                                                                                                                                                                                                                                       Set
                                                       ABC99986
                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acid (PNA) oligomers for detecting single nuclectide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonuclectides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, certral nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABF82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This invention describes novel oligonuclectide primers or peptide nucleic
                                                                                                                                                                                                                                                                                                                                            SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polymuclectide fragments and antisense oligonuclectides used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .;
0
                                                                                                                     .
0
                                                                                                                                                                                                                                                                                                                   Oligonucleotide SEQ ID NO 229445 for detecting SNP TSC0055973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID NO 229445; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62.5%; Score 10; DB 1; Length 13; 100.0%; Pred. No. 1.1e+02;
                                                                                           DB 1; Length 13;
1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                   Indels
                                                                                                                      ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seguence 13 BP; 0 A; 3 C; 8 G; 2 T; 0 U; 0 Other;
                                                                  Sequence 13 BP; 0 A; 9 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                         62.5%; Score 10; DB 100.0%; Pred. No. 1.1 ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 100.0%; Pred. No. 1.1
Matches 10; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Berlin K;
                                                                                                                                                                                                                                       ABH29468 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-APR-2001; 2001WO-IB000713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                          (first entry)
                                                                                        Query Match
Best Local Similarity 100.
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Olek A, Piepenbrock C,
                                                                                                                                            2 GGCGGCGGC 11
                                                                                                                                                                      4
                                                                                                                                                                      13 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (EPIG-) EPIGENOMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                        WO200177384-A2
                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens,
                                                                                                                                                                                                                                                                                          22-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-OCT-2001
                                                                                                                                                                                                                                                                ABH29468;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                             RESULT 96
                                                                                                                                                                                                                           ABH29468
                                                                                                                                                                                                                                                   8$$$$$$
                                                                                                                                               ઠે
                                                                                                                                                                      셤
```

```
This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99889, ABF00010-ABF99889, ABH00010-ABH99889 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at
                                                                                                                                                                                                 SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    typing, i
cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oligonucleotide SEQ ID NO 229448 for detecting SNP TSC0055973.
                                                                                                                                                 Oligonucleotide SEQ ID NO 100005 for detecting SNP TSC0024859.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 100005; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of oligonucleotides, useful for diagnosis and cell igned to detect single-nucleotide polymorphisms and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seguence 13 BP; 0 A; 3 C; 10 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       62.5%; Score 10; DB 1; L. 100.0%; Pred. No. 1.1e+02; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Berlin K;
  짪.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-APR-2001; 2001WO-IB000713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABH29471/c
ID ABH29471 standard; DNA; 13
ABC99988 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Local 10; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200200000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 990999099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-657177/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       methylation status.
                                                                                                                                                                                                                                                                                                                                                         WO200177384-A2
                                                                                                  21-FEB-2002
                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                        18-OCT-2001.
                                                  ABC99988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABH29471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               designed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 X B X B X B X B X
```

1 CGGCGGGCGG 10

à

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention describes novel oligonuclectide primers or peptide nucleic acid (PNA) oligomers for detecting single nuclectide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonuclectides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABE9989, ABR00010-ABE9989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but
SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                          18
                                                                                                                                                                                                                                                                                                                                   Set of oligonucleotides, useful for diagnosis and cell typing, designed to detect single-nucleotide polymorphisms and cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oligonucleotide SEQ ID NO 229447 for detecting SNP TSC0055973.
                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; SEQ ID NO 229448; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62.5%; Score 10; DB 1; Length 13; 100.0%; Pred. No. 1.1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 13 BP; 1 A; 8 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ttp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                       Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABH29470 standard; DNA; 13 BP.
                                                                                                                                                                     06-APR-2001; 2001WO-IB000713
                                                                                                                                                                                                    07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-APR-2001; 2001WO-IB000713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 100.
                                                                                                                                                                                                                                                                   Olek A, Piepenbrock C,
                                                                                                                                                                                                                                   (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 096066666 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                                                                       methylation status.
                                                                                                   WO200177384-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200177384-A2
                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                    18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABH29470;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 95
ABH29470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best
   Š
```

```
This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a crange of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABH99989, ABF00010-ABH99989, ABF00010-ABH9989, ABF00010-ABH99898, CABH9989 and ABH0010-ABH99989 and ABH0010-ABH99989 and ABH0010-ABH99989, ABH0010-ABH99989 and ABH0010-ABH99989, ABH0010-ABH998980, ABH0010-ABH998980, ABH0010-ABH998980, ABH0010-ABH99989, ABH0010-ABH998980, ABH0010-ABH998980, ABH0010-ABH998980, ABH0010-ABH998980, ABH0010-ABH998980, ABH0010-ABH998980, ABH0010-ABH998980, ABH0010-ABH998980, ABH0010-ABH99880, ABH90010-ABH99880, ABH900010-ABH99880, ABH90010-ABH99880, ABH90010-ABH99880, ABH90010-AB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine methylation status.
                                                                                                                                                                                    Set of oligonucleotides, useful for diagnosis and cell typing, idesigned to detect single-nucleotide polymorphisms and cytosine methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oligonucleotide SEQ ID NO 100006 for detecting SNP TSC0024859.
                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID NO 229447; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; SEQ ID NO 100006; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ch 62.5%; Score 10; DB 1; Length 13; Il Similarity 100.0%; Pred. No. 1.1e+02; 10; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 13 BP; 0 A; 4 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       was obtained in electronic format from WI
ftp.wipo.int/pub/published_pct_sequences
                                                                                ጟ
                                                                                Berlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Berlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-APR-2001; 2001WO-IB000713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-APR-2000; 2000DE-01019173.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABC99989 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-FEB-2002 (first entry)
                                                                                Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Olek A, Piepenbrock C,
                         (EPIG-) EPIGENOMICS AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 000000000 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (EPIG-) EPIGENOMICS AG
                                                                                                                                   WPI; 2001-657177/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ceeceeecee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200177384-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABC99989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 100
ABC99989/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

Sequence 13 BP; 2 A; 8 C; 3 G; 0 T; 0 U; 0 Other;

g

ö This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABC9989, ABF00010-ABF9989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, contral nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC9989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at fire wipo int/pub/published_pct_sequences SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic. Gaps Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine . Oligonucleotide SEQ ID NO 229446 for detecting SNP TSC0055973. Claim 1; SEQ ID NO 229446; 29pp + Sequence Listing; German. 62.5%; Score 10; DB 1; Length 13; 100.0%; Pred. No. 1.1e+02; ive 0; Mismatches 0; Indels Sequence 13 BP; 0 A; 10 C; 3 G; 0 T; 0 U; 0 Other; ftp.wipo.int/pub/published_pct_sequences χ, ABH29469 standard; DNA; 13 BP. 06-APR-2001; 2001WO-IB000713 07-APR-2000; 2000DE-01019173 22-FEB-2002 (first entry) Query Match 62.5 Best Local Similarity 100. Matches 10, Conservative Olek A, Piepenbrock C, (EPIG-) EPIGENOMICS AG. 11 13 GGCGGGCGGC 4 WPI; 2001-657177/75. 2 GGCGGGCGGC methylation status. WO200177384-A2. Homo sapiens. 18-OCT-2001. ABH29469; ద ð

```
The invention relates to an isolated nucleic acid (NI) comprising at
least 20 but not more than 1500 consecutive nucleotides of the optineurin
promoter appearing as ADB13890. Also included are the optineurin promoter
operably linked to a heterologous nucleic acid, a nucleic acid capable of
detecting a single nucleotide polymorphism (SNP) in the optineurin
cc promoter, a host cell comprising the promoter operably linked to a
cheterologous sequence, diagnosing or prognosing glaucoma in a sample
cobtained from a cell or bodily fluid (comprising detecting a polymorphism
cc in a promoter region of the optineurin gene, associated with a glaucoma
cphenotype), detecting a SNP sequence variation in a sample containing
cn a sample containing DNA, determining the presence or increased
cusceptibility to glaucoma or to a progressive ocular hypertensive
disorder resulting in loss of visual field in a patient (or the severity
cc or progression of glaucoma in a patient, comprising providing
cn progression of glaucoma in a patient, comprising providing
cn progression containing the variation within the optineurin
                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               promoter and amplifying the DNA) and detecting a polymorphism (comprising obtaining a sample containing human genomic DNA, providing a nucleic acid capable of detecting a SNP located within an optineurin promoter, and detecting the polymorphism). The invention is used to diagnose and prognose glaucoma also to treat glaucoma related disorders. The present sequence is an optineurin promoter motif, repeat element or
                                                                                                                                                                                                                                                                                                                                                                                             Human, optineurin, ds; ophthalmological, single nucleotide polymorphism; SNP; glaucoma, progressive ocular hypertensive disorder; glaucoma related disorder; motif; repeat element; regulatory region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New nucleic acid sequences of the optineurin gene are useful to detect polymorphisms particularly single nucleotide polymorphisms in the optineurin promoter to diagnose, prognose and treat glaucoma and related
                                            Gaps
                                                                                                                                                                                                                                                                                                                                                        Optineurin promoter motif, repeat element or regulatory region #456.
                                            ö
62.5%; Score 10; DB 1; Length 13; 100.0%; Pred. No. 1.1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 11; SEQ ID NO 458; 159pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>ы</u>
                                                                                                                                                                                                                              ADE14347 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-MAR-2002; 2002US-00091281.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-MAR-2002; 2002US-00091281.
                                                                                                                                                                                                                                                                                                             29-JAN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Morissette J,
                                            10; Conservative
                                                                                     1 CGCCGGCCG 10
                                                                                                                          ceeceeecee 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MORI/) MORISSETTE J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-864168/80.
                     Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SIEE/) SI E. (RAYM/) RAYMOND V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US2003190617-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-OCT-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Raymond V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    disorders.
                                                                                                                                                                                                                                                                       ADE14347;
                                                                                                                            10
    Query Match
                                            Matches
                                                                                     ઠે
                                                                                                                          셤
```

SXS

셤 ŝ

```
ខ្លង្គប្
                                                                                                                                                              ò
                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                     The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding reggion, 5' or 3' end genomic flanking regions, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiathmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an expectific antial antial anti-privity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of adenosine receptor, producing sensitivity to adenosine, reducing levels of ubiquinone or lung surfacteant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence date for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Katz E, Pabalan J, Aguilar D;
                                                                                                                      ö
                                                                               Length 13;
                                                                                                                    Indels
                                                       Score 10; DB 1; Ler
Pred. No. 1.1e+02;
                                    Sequence 13 BP; 0 A; 4 C; 9 G; 0 T; 0 U; 0 Other;
                                                             62.5%; Scor.
100.0%; Pred. No. 1...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; SEQ ID NO 11636; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                               Human C/EBP antisense fragment no.2254.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sandrasagra A, Ka
i, Shahabuddin S;
                                                                                                                                                                                                                                                                                             BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (EPIG-) EPIGENESIS PHARM INC
putative regulatory region.
                                                                                                                                                                                                                                                                                           ABZ96394 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                      17-OCT-2003 (first entry)
                                                                     Query Match 62.5
Best Local Similarity 100.
Matches 10; Conservative
                                                                                                                                                        11
                                                                                                                                                                             2 GGCGGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Li Y, Sar
Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200285308-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ubiquinone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Miller S,
                                                                                                                                                                                                                                                                                                                                 ABZ96394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW,
                                                                                                                                                                                                                                                                        ABZ96394,
```

```
This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiathmatic, analgesic, hypotenalive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to
                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis;
                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted truncleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Katz E, Pabalan J, Aguilar D;
                                                                                                                                                                                                                                   ö
                                                                                                                                                      Score 10; DB 1; Length 13;
Pred. No. 1.1e+02;
                                                                                                                                                                                                                               0; Indels
                                                                            Sequence 13 BP; 0 A; 9 C; 4 G; 0 T; 0 U; 0 Other;
at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                             100.0%; Pred. ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 15; SEQ ID NO 11636; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pulmonary transplantation rejection; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human C/EBPN DNA fragment 2254.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-APR-2001; 2001US-0286036P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-2002; 2002WO-US013143.
                                                                                                                                                      62.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABD20303 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                        Local Similarity 100.
18s 10; Conservative
                                                                                                                                                                                                                                                                                                    2 GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                             4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                             ენეენტენე
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200285309-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABD20303;
                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 104
                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABD20303,
```

```
ő
reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary transplantation emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc., tissue environment and thereby, to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiration; respiration; pulmonary distress syndrome; pain; cystic fibrosis; pulmonary distress syndrome; pain; cystic fibrosis; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antisense oligonucleotide; multiple target; antisense treatment;
                                                                                                                                                                                                                                                                                                                                                               .;
0
                                                                                                                                                                                                                                                                                                                     62.5%; Score 10; DB 1; Length 13; 100.0%; Pred. No. 1.1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                Sequence 13 BP; 0 A; 9 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C/EBP-beta antisense oligonucleotide fragment.
                                                                                                                                                                                                                          e.g., lung, brain, heart, kidney, etc,
prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 71; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAX55130 standard; DNA; 14 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                             10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                      2 GCCGGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                             13 GGCGGGCGGC 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (DYEC-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-SEP-1997;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX55130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAX55130,
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, conditions or mixtures. The antisense oligonuclectides may be derived from sequences AAX5572-74. These multiple target oligonuclectides for specifically AAX5180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, altergic rhinitis, acute asthma, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases, as segments of RNAs encoding proteins associated with one or more diseases, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, a well as all types of cancers which may metastasize or have metastasized Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia, lymphoma; carcinoma; metastasis; ss. Gaps New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or ö Human adenosine receptor related polynucleotide SEQ ID NO:2266. Length 14; 0; Indels to the lungs, including breast and prostate cancer Sequence 14 BP; 0 A; 10 C; 4 G; 0 T; 0 U; 0 Other; Score 10; DB 1; Le Pred. No. 1.2e+02; 100.0%; Pred. No. Disclosure; Page 548; 1343pp; English. Hb. 98US-0095212P. 99WO-US017712. 62.5%; (UYEC-) UNIV EAST CAROLINA. AAA34577 standard; DNA; 14 (first entry) Conservative 11 ß WPI; 2000-205971/18. 2 GGCGGGCGGC 14 GGCGGGCGC Local Similarity es 10; Conserv WO200009525-A2. Homo sapiens. 28-JUL-2000 03-AUG-1999; 03-AUG-1998; 24-FEB-2000 AAA34577; Query Match Nyce JW; cancers RESULT 106 Matches AAA34577 셤

```
useful for the treatment of diseases associated with inflammation, useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including construct and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the concernation which activates adenosine receptors causing release of deoxyadenosine which activates adenosine receptors causing conclectide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 error them previously named sequences. SEQ ID NO:1 to 185, but the sequences differ from the previously amed sequences. SEQ ID NO:1 to 185, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 185, but the sequence of AAA33992) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match in the interpretation of the present invention of the interpretation in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    listing
               0
```

Sequence 14 BP; 0 A; 10 C; 4 G; 0 T; 0 U; 0 Other;

```
Gaps
                             ö
62.5%; Score 10; DB 1; Length 14; 100.0%; Pred. No. 1.2e+02;
                           0; Indels
         100.0%; Prec. ...
            Best Local Similarity 100.
Matches 10; Conservative
 Query Match
```

ö

2 GGCGGGCGC 11 14 GGCGGGCGC 5 ò g

AAF20699 standard; DNA; 14 BP. AAF20699; RESULT 107

14-MAR-2001 (first entry)

Human C/EBP polynucleotide fragment #2266.

immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; cancer; 88.

Homo sapiens.

WO200062736-A2

26-OCT-2000

24-MAR-2000; 2000WO-US008020

99US-0127958P 36-APR-1999;

(UYEC-) UNIV EAST CAROLINA. NYCE/) NYCE

Nyce JW;

WPI; 2000-679539/66.

Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antisinflammatory, analgesic, immunosuppressive, antisathmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with cumy/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoslobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokines, endogenously produced specific and non-specific enzymes, chemokines receptors, adenosine receptors, bradykinin receptors, central chemokine receptors, adenosines receptors, briding proteins and maliamancy and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and maliamancy associated proteins The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy (ies) and/or sunfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergie, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CP), allergic rhinitis (AR), pulmonary conditions and/or cancer AAF18434 to AAF21543 represent human polynucleotides and/or harman invention which he exemplification of the present invention
                                                                                                                   present invention describes low adenosine (A) content antisense
                                                         Claim 14; Page 265; 1592pp; English.
and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the present invention
```

Sequence 14 BP; 0 A; 10 C; 4 G; 0 T; 0 U; 0 Other;

Gaps ö 62.5%; Score 10; DB 1; Length 14; 0; Indels 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; 10; Conservative Local Similarity Query Match Matches

ö

2 GGCGGGCGC 11 Ŋ 14 GGCGGGCGC

g 8

Human C/EBP antisense fragment no.2253. ABZ96393 standard; DNA; 14 BP. 17-OCT-2003 (first entry) ABZ96393;

Human; antisense; lung dysfunction; nasal airway dysfunction; antinflammatory steroid; ubiquinone; antinflammatory; antiallergic; antiantimentic; hypotensive; dimmunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.

Homo sapiens.

WO200285308-A2

31-OCT-2002.

23-APR-2002; 2002WO-US013135.

24-APR-2001; 2001US-0286137P.

(EPIG-) EPIGENESIS PHARM INC.

```
first active agent comprising an oligomorfectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nuclectides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entileflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallargic, antistabhmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an entilflammatory steroid in a subject, for reducing or depleting levels of or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                       Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            respiratory tract inflammation, adenosine sensitivity; lung; cancer; surfactant depletion; antialrergic; antibilammaticy; antialmaticy; antialmaticy; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hyportension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lung surfactant in a subject's tissue, or treating bronchoconstriction, ung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                        The invention relates to a novel pharmaceutical composition, which has a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; antisense; bronchoconstriction; allergy; hyposecretion; pain;
                     Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62.5%; Score 10; DB 1; Length 14; 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; Indels
                     Katz E, Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Seguence 14 BP; 0 A; 10 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                               Disclosure; SEQ ID NO 11635; 872pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ftp.wipo.int/pub/published_pct_sequences
                   Nyce JW, Li Y, Sandrasagra A, K
Miller S, Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human C/EBPN DNA fragment 2253.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-APR-2002; 2002WO-US013143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-APR-2001; 2001US-0286036P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.vv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABD20302 standard; DNA; 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
                                                                                WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200285309-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                    ubiquinone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABD20302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABD20302,
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
```

This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstruction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, conformation allergies are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises. (c) adelivery device, in separate containers, (b) the oligonuclectides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiatemental activity, is a largesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, empkyeema, chronic obstructive pulmonary disease, pulmonary disease or condition such as pulmonary vasoconstriction, in the target RNA serves to prevent the breakdown of the reduced adenosine content of the anti-sense oligos corresponding to the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to the product of the content o t C Gaps Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted toucleic acids associated with lung airway or lung dysfunction, and Secondary structure; mRNA; phosphorothicate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss. Pabalan J, Aguilar D; ö Antisense oligonucleotide 753, targeting adenosine Al receptor. 62.5%; Score 10; DB 1; Length 14; 100.0%; Pred. No. 1.2e+02; tive 0; Mismatches 0; Indels Sequence 14 BP; 0 A; 10 C; 4 G; 0 T; 0 U; 0 Other; Claim 15; SEQ ID NO 11635; 763pp; English. Katz E, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; AAV47253 standard; DNA; 13 BP (EPIG-) EPIGENESIS PHARM INC. 10-NOV-1998 (first entry) 10; Conservative 2 GGCGGGCGGC 11 bronchodilating agent. 14 GGCGGGCGC 5 WPI; 2003-093058/08. Local Similarity Synthetic. Homo sapiens. Nyce JW, 1 Miller S, AAV47253; Query Match RESULT 110 Matches 8 셤

```
hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                   WO9913886-A1
                                                                                                                        17-SEP-1998;
                                                                                                                                                  17-SEP-1997;
                                                                                                                                                             09-JUN-1998;
                                                                                            25-MAR-1999
                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA33073;
                                                                                                                                                                                                                 Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAA3307
    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                    burnan adenosine Al receptor, the design of which required that target the human adenosine Al receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the artisense molecules are created they can be used to target their antisense molecules are created they can be used to target their containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the Grotein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                             Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                   /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human adenosine Al receptor antisense oligonucleotide fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61.2%; Score 9.8; DB 1; Length 13; 84.6%; Pred. No. 1.2e+02; ive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;
             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                              Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAX53630 standard; DNA; 13 BP.
                                                                                                                                                                       96US-00757024
                                                                                                                                            97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 61.2%;
Best Local Similarity 84.6%;
Matches 11; Conservative
                                                                                                                                                                                               (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 GCGGCCGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GAGGGCGCCATGG 13
                                                                                                                                                                                                                                                    WPI; 1998-322464/28.
            Key
modified_base
                                                                                                                                          26-NOV-1997;
                                                                                                                                                                       26-NOV-1996;
                                                                                         WO9823294-A1
                                                                                                                   04-JUN-1998.
                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX53630
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

```
The specification describes antisense oligonucleotides (AAXS2869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis, autreas syndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. bepatocellular carcinoma, kidney cancer, pancreatic cancer, breast cancer, lung cancer, pancreatic cancer, lepatocellular carcinoma, kidney cancer, melanoma, hepatic metastasses as well as all types of cancers which may metastassize or have metastasized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiathmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense oligonucleotides used in treatment of, e.g. pulmonary vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 9.8; DB 1; Length 13;
Pred. No. 1.2e+02;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Low adenosine antisense oligonucleotide SEQ ID NO:762.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 1.2e
0, Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-00093972.
                                                                                                                                                                                                                                                                                                                                       98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                           97US-0059160P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ch 61.2%;
1 Similarity 84.6%;
11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA33073 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GCGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GAGGGCGCCATGG 13
prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
```

```
The present interaction describes a new composition computation controlled interaction describes a new composition controlled interacts and/or inflammation. The ON can have antiinflammatory, antiallergic, and/or attial maximum the ON can have antiinflammatory, antiallergic, and/or attial maximum the ON can have antiinflammatory, antiallergic, impaired airways, including lung disease associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONS reduces side effects. The A-containing ONS break down with the correspond to SEQ ID NO:1 to 2815, and then the last 185 concloonstriction and inflammation. AAA2313 to AAA3323 to speed to invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 concloonstrictions are also called SEQ ID NO:1 to 2815, and then the last from the previously named sequences SEQ ID NO:1 to 185, but the sequences differ them the previously named sequences SEQ ID NO:1 to 185, and then the last named of the present invention of the present invention. Not the previously named sequences SEQ ID NO:1 to 185, and then the last named the previously contained the previously contained to the present invention. Not the previously named sequences SEQ ID NO:1 to 185, and the previously named sequences SEQ ID NO:1 to 2815, and the previously named sequences SEQ ID NO:1 to 2815, and the previously named sequences SEQ ID NO:1 to 2815, and the previously named sequences SEQ ID NO:1 to 2815, and the previously named sequences SEQ ID NO:1 to 2815, and the previously named sequenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         an antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:716.
hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               present invention describes a new composition comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 9.8; DB 1; Lengtn 15. Pred. No. 1.2e+02;
                      cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seguence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 18; Page 361; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA03432 standard; DNA; 13 BP.
                                                                                                                                                                                                                   99WO-US017712
                                                                                                                                                                                                                                                                   98US-0095212P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61.2%;
84.6%;
                                                                                                                                                                                                                                                                                                                (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GCGGCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GAGGGGGCATGG 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                      WO200009525-A2
                                                                         sapiens.
                                                                                                                                                                                                                   03-AUG-1999;
                                                                                                                                                                      24-FEB-2000
  pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA03432;
                                                                                                                                                                                                                                                                                                                                                                   Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 113
                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
  셤
```

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine—mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine A2a receptor agonist (Ia), or an oligonucleotide genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 receptors, and has A1, A2b or A3 agonist activity or A2a antagonist activity or A2a antagonist activity or A2a antagonist activity or A2a antagonist activity at this receptor). (I) may be a mixture of (Ia) and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02719, AAA02721 and AAA02723 to AAA03715 represent specifically claimed phosphorothioate antisense oligonucleotides for use in the composition of the present invention. AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive
                 adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; enguraventricular tachycafia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          phosphorothioate oligonucleotides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 9.8; DB 1; Length 13;
Pred. No. 1.2e+02;
0; Mismatches 2; Indels
  adenosine Al receptor; antisense oligonucleotide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                                                                                                                                                                                                                          99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                   98US-0088501P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61.2%;
84.6%;
                                                                                                                                                                                                                                                                                                                                                                       98US-00093972
98US-0088657P
                                                                                                                                                                                                                                                                                                                                                                                                                                   (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF19195 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce JW, Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     injury.
                                                                                                                                                               Homo sapiens.
Synthetic.
                                                                                                                                                                                                                           WO9963938-A2
                                                                                                                                                                                                                                                                                                          08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                   08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                       09-JUN-1998;
                                                                                                                                                                                                                                                                    16-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF19195
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 品菜
```

Ouery Match

```
Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pani; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                       Human adenosine Al receptor polynucleotide fragment #762.
                                                                                                                                                                                                                                                                                                                                                                                      Claim 14; Page 117; 1592pp; English.
                                                                                                                                                                                                                                   24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                       99US-0127958P
                                                                                                                                                                                                                                                                         (UYEC-) UNIV EAST CAROLINA.
                   14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the present invention
                                                                                                                                                                                                                                                                                                                           WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                    (NYCE/) NYCE J W.
                                                                                                                                                                                           WO200062736-A2
                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                       06-APR-1999;
                                                                                                                                                     cancer; ss.
                                                                                                                                                                                                               26-OCT-2000
 AAF19195;
                                                                                                                                                                                                                                                                                                        Nyce JW;
```

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense cligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central contractors, may apply and antibodies and non-nervous system (CS) and peripheral nervous and non-nervous system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary
Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypertension, emphysema, chronic obstructive pulmonary disease (COPD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            receptors, CNS and peripheral nervous and non-nervous system peptide
```

Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;

61.2%; Score 9.8; DB 1; Length 13;

```
ö
                  Gaps
                  ô
                  Indels
Pred. No. 1.2e+02;
                 0; Mismatches
       84.68;
                                 15
      Best Local Similarity 84.6
Matches 11; Conservative
                                 GCGGCCGCCATCG
                                 ઠ
```

GAGGGCGCCATGG 13

셤

RESULT 115

ABZ94889 standard; DNA; 13 BP.

ABZ94889;

(first entry) 17-OCT-2003

antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. Human; antisense; lung dysfunction; nasal airway dysfunction; Human adenosine Al receptor antisense fragment no.752.

Homo sapiens.

WO200285308-A2

31-OCT-2002.

23-APR-2002; 2002WO-US013135.

24-APR-2001; 2001US-0286137P. (EPIG-) EPIGENESIS PHARM INC Aguilar D; Katz E, Pabalan J, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; Nyce JW, | Miller S,

WPI; 2003-229219/22.

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or ubiquinone.

Disclosure; SEQ ID NO 10131; 872pp; English.

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5 or 3 end genemic flanking regions, 5 and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or masal altrway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an forther therapy. lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO antinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, at ftp.wipo.int/pub/published_pct_sequences

Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other;

Query Match

DB 1; Length 13; 61.2%; Score 9.8;

ઠ 셤

8888888888 ઠ 셤 ö comprising oligonucleotides, refective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine eensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention hyperonic antiminal activity antiasthmatic, Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or vailability, or to increase the degradation of the target mRNA or reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory invention describes a novel composition (a) a first active agent t Gaps oligonucleotide containing less percentage of adenosine, targeted unucleic acids associated with lung airway or lung dysfunction, and ä ö Pabalan J, Aguilar Pharmaceutical composition for treating asthma, has antisense Human adenosine Al receptor oligonucleotide fragment 752. Indels No. 1.2e+02; 0; Mismatches Claim 15; SEQ ID NO 10131; 763pp; English. Katz E, Pred. s, Sandrasagra A, L, Shahabuddin ABD18737 standard; DNA; 13 BP. 23-APR-2002; 2002WO-US013143. 24-APR-2001; 2001US-0286036P. (EPIG-) EPIGENESIS PHARM INC 84.68; (first entry) 3 GCGGGCGCCATCG 15 13 11; Conservative 1 GAGGCGGCATGG bronchodilating agent. WPI; 2003-093058/08. Li Y, Sar Tang L, Similarity WO200285309-A2 Homo sapiens 29-JUL-2004 31-OCT-2002 Nyce JW, Miller S, ABD18737; Best Local Matches 1 RESULT 116

ö distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it. Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult Gaps bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss. /*tag= a /note= "contains phosphorothioate internucleotide linkages" Secondary structure; mRNA; phosphorothioate backbone; G-protein; ; 0 Antisense oligonucleotide 752, targeting adenosine Al receptor. Score 9.8; DB 1; Length 13; Pred. No. 1.2e+02; 0; Mismatches 2; Indels Sequence 13 BP; 2 A; 2 C; 8 G; 1 T; 0 U; 0 Other; Location/Qualifiers Claim 12; Page 8-24; 47pp; English. respiratory distress syndrome etc. ö BP 96US-00757024. 61.2%; 84.6%; 97WO-US022017. AAV47252 standard; DNA; 14 (UYEC-) UNIV EAST CAROLINA. (first entry) 3 GCGGGCGCCATCG 15 1 GAGGGGGGCATGG 13 Conservative WPI; 1998-322464/28. Local Similarity Key modified_base Homo sapiens 26-NOV-1997; 26-NOV-1996; WO9823294-A1 10-NOV-1998 04-JUN-1998. respiratory Synthetic AAV47252; Query Match Nyce JW; RESULT 117 Matches AAV4725

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target oligonucleotides
                                                        inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                       to treat or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary bypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepaticellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
                                                                                                                                                                                                         Gaps
may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonuclectides can be used to treat in prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New antisense oligonucleotides used in treatment of, e.g. pulmonary vasoconstriction.
                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                               Score 9.8; DB 1; Length 14;
Pred. No. 1.3e+02;
0; Mismatches 2; Indels
                                                                                                                             Sequence 14 BP; 2 A; 3 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                   ;
;
                                                                                                                                                                                                                                                                                                                                                                    AAX53629 standard; DNA; 14 BP.
                                                                                                                                                                 61.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                         3 GCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                             GAGGGGGGCATGG 13
                                                                                                                                                                                                   11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-229400/19.
                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                          AAX53629;
                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nyce JW;
                                                                                                                                                                                                                                                                                                                              RESULT 118
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                   AAX53629
 883333333
                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                         ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating eg. ischemic conditions, pulmonary vasconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive
                                                                        e.9
acute asthma, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cyetic fibrosis, pulmonary hypertension, pulmonary assoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g colon cancer, breast cancer, lung cancer, pancreatic cancer, hepstocellular carcinoma, kidney cancer, melanoma, hepatic metastases, a well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            phosphorothioate, impaired respiration; inflammation; allergy; allergy; allergy allergy allergy; antiathergy; artiathergy; antiathergy; antiathergy; antiathmatic; cyrostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysems; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                                                                                                                                                                                             Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; adenosine receptor; low adenosine antisense oligonucleotide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                61.2%; Score 9.8; DB 1; Length 14; 84.6%; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                           2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Low adenosine antisense oligonucleotide SEQ ID NO:761.
                                                                                                                                                                                          Sequence 14 BP; 2 A; 3 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 18; Page 361; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA33072 standard; DNA; 14 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                               3 GCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                        1 GAGGGCGCCATGG 13
                                                                                                                                                                                                                                                                         11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-205971/18.
                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200009525-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA33072;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancers
                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 119
                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA3307
    8888888888888
                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                      셤
```

```
Carcinomas, and cancers, and cancers state in as remainings, including breast and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONS break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present the invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to AAA3392) are specifically claimed ONS from the present invention. N.B. Sequences given in the disclosure of the present invention. N.B.
pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,
                                                                                                                                                                                                                                                                                                                                                                               listing
```

Sequence 14 BP; 2 A; 3 C; 8 G; 1 T; 0 U; 0 Other;

Gaps ; 0 Score 9.8; DB 1; Length 14; Pred. No. 1.3e+02; 2; Indels 0; Mismatches 61.2%; 84.6%; 3 GCGGCGGCATCG 15 1 GAGGGCGCCATGG 13 Local Similarity 84.6 tes 11; Conservative Query Match Matches ò

ö

AAZ64806 standard; RNA; 14 BP. 28-MAR-2000 AAZ64806;

Enzymatic nucleic acid; hammerhead ribozyme; virus replication; cleavage; cirrhosis; liver failure; hepatocellular carcinoma; interferon; cancer; autoimmune disease; ss. Substrate for hairpin ribozyme which cleaves HCV at nt. 5509. (first entry) Hepatitis C virus.

98US-0083217P. 98US-0100842P. 99US-00257608. 99US-00274553. 99WO-US009027. WO9955847-A2. 26-APR-1999; 18-SEP-1998; 25-FEB-1999; 23-MAR-1999; 27-APR-1998; 04-NOV-1999

(RIBO-) RIBOZYME PHARM INC.

Mcswiggen JA, WPI; 2000-062023/05. Blatt L,

The present sequence represents the preferred target sequence of an Claim 2, Page 98; 123pp; English. Novel ribozymes for the hepatitis C infection.

treatment of diseases and conditions related to

ä

Macejak

PA,

Pavco

ъ,

Roberts

enzymatic nucleic acid, especially a hairpin ribozyme, which cleaves the Hepatitis C virus (HCV) RNA sequence at the base position given in the descriptor line. The HCV sequence was screened for optimal ribozyme target sites using a computer folding algorithm and regions of the mRNA which did not form secondary folding structures and contained potential ribozyme cleavage sites were identified. Ribozymes were synthesised to target these sites and their activities optimised by either varying the length of the binding arms or by modification to prevent degradation by

ö The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal admage and/or failure.

(I) is an adenosine AZa receptor agonist (Ia), or an oligomucleotide (Ib), containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine Al, AZa, AZb or A3 receptors, and has A1, AZb or A3 agonist activity or AZa antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and (1b), and optionally also contains one more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure nucleases. The ribozymes of the invention inhibit gene expression and/or viral replication, and are used to treat diseases associated with Hepatitis C virus (HCV) infection, e.g. cirrhosis, liver failure and hepatocislular carcinoma. The riverses may be used in combination with interferon to treat HCV infection, other infectious diseases, autoimmune adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss. Gaps Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:715. composition for treating or preventing e.g. cardiopulmonary Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; ö Score 9.8; DB 1; Length 14; Pred. No. 1.3e+02; 0; Mismatches 2; Indels Sequence 14 BP; 3 A; 5 C; 4 G; 0 T; 2 U; 0 Other; Claim 17; Page 34; 252pp; English. AAA03431 standard; DNA; 14 BP. 98US-0088501P. 98US-00093972. 98US-0088657P. 99WO-US012775. (EPIG-) EPIGENESIS PHARM INC. 61.3%; 84.6%; 19-MAY-2000 (first entry) Query Match Best Local Similarity 84.6' CGGCGGGCGGCAT 13 CGGCGAGCTGCAT 1 diseases, and cancer WPI; 2000-116433/10. Nyce JW, Hill JL; Homo sapiens. WO9963938-A2 08-JUN-1999; injury 08-JUN-1998; 09-JUN-1998; 16-DEC-1999, Synthetic. AAA03431; 13 Novel renal RESULT 121 AAA03431 888888888 8 셤

```
ö
            administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsie); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02719, AAA02721 and AAA02723 to AAA03115 represent specifically claimed phosphorothioate antisense oligonucleotides for use in the composition of the present invention. AAA02718, AAA02722 and AAA03716 to AAA03720 represent other phosphorothioate oligonucleotides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; respiratory distructs syndrome; pann; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes low adenosine (A) content antisense oligonuclectides and compositions (I) comprising them. In the antisense oligonuclectides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
                                                                                                                                                                                                                                                                                                                                         Gaps
(particularly where associated with ischaemia, toxin release and/or
                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                Length 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human adenosine Al receptor polynucleotide fragment #761.
                                                                                                                                                                                                                                                                                                                                 2; Indels
                                                                                                                                                                                                                                                       Sequence 14 BP; 2 A; 3 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                              Score 9.8; DB 1;
Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 14; Page 117; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                   .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF19194 standard; DNA; 14 BP
                                                                                                                                                                                                                                                                                            61.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                         3 GCGGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                              1 cacceccarec 13
                                                                                                                                                                                                                                                                                                                                 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                   present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200062736-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ното варіелв.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF19194;
                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 122
                                                                                                                                                                                                                                                                                                                                   Matches
888888888888888
                                                                                                                                                                                                                                                                                                                                                                         ઠે
```

```
The antiberine outpuintic control of target polypoptides associated with antiberine outpuintic control of target polypoptides associated with a cerivating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced appecific and non-apecific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, brinding proteins, adenosine receptors, brinding proteins, adenosine receptors, brinding proteins, adenosine receptors, brinding proteins, growth factors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system peptide receptors, can defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergy (ies) and/or allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic thinitis (AR), pulmonary infections, bronchitis, and antise the antise of the antis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
antisense oligonucleotides and (I) can be used to down-regulate the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Enzymatic nucleic acid, RNA cleavage, Hepatitis C virus infection, HCV ribozyme; HCV expression, HCV replication; cirrhosis, virucide, liver failure, hepatocellular carcinoma; HCV infection, drug therapy, type I interferon; interferon alpha; interferon beta; cytostatic; interferon gamma; consensus interferon; hepatotropic; antiinflammatory; substrate; hairpin ribozyme; HP ribozyme; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pulmonary transplantation rejection, pulmonary infections, bronchit and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hepatitis C virus substrate #128 for HCV hairpin ribozyme #128.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Macejack D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 9.8; DB 1; Length 14; Pred. No. 1.3e+02; 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 14 BP; 2 A; 3 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pavco PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Roberts B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61.2%;
84.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-00274553.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-00274553.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABX01643 standard; RNA; 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-DEC-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 84.6'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 GCGGGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 cacceccarce 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Blatt L, Mcswiggen JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MCSWIGGEN J A.
ROBERTS B.
PAVCO P A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-617759/66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MACEJACK D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hepatitis C virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US2002082225-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BLAT/) BLATT L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27-JUN-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABX01643;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MCSW/)
(ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MACE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABX01643,
셤
```

ö specifically cleave RNA derived from Hepatitis C virus (HCV). The card our libozyme is in a hammerhead (HH) or hairpin (HP) motif where the binding arms comprise sequences complementary to one of the substrate sequences defined in the specification. The HCV intozymes are useful for modulating the expression and/or replication of HCV. They can be used to treat cirrhosis, liver failure and/or replication of hepatocallular carcinoma. The HCV infection in conjunction is associated with HCV infection in conjunction with one or more other drug therapies, particularly type I interferon, especially interferon alpha, beta or gamma or consensus interferon. The present sequence represents a substrate for a HCV hairpin (HP) ribozyme. Note: Some of the sequence data for this patent did not form part of the printed specification. The complete sequence data for this patent was obtained in electronic format directly from the USPTO web site at New ribozymes targeting RNA derived from hepatitis C virus inhibit viral ribozyme; enzymatic nucleic acid molecule; hepatitis C virus infection; antiviral; gene therapy; substrate; ss. New enzymatic nucleic acid molecule, which specifically cleaves minus strand RNA derived from hepatitis C virus, useful for modulating the expression and/or replication of hepatitis C virus. replication and are useful to treat hepatitis C virus infections and cirrhosis, liver failure or hepatocellular carcinoma. Gaps ö The present invention relates to enzymatic nucleic acids which Query Match 61.3%; Score 9.8; DB 1; Length 14; Best Local Similarity 84.6%; Pred. No. 1.3e+02; Matches 11; Conservative 0; Mismatches 2; Indels Macejack D; Hepatitis C virus hairpin ribozyme substrate sequence. Sequence 14 BP; 3 A; 5 C; 4 G; 0 T; 2 U; 0 Other; Pavo PA, seqdata.uspto.gov/psipsDIDEntry.html Roberts E, Example 1; Page 44; 65pp; English Claim 2; Page 62; 80pp; English BP. 15-FEB-2000; 2000US-00504231. 99US-00274553 AEB76567 standard; RNA; 14 (first entry) 1 CGGCGGCGGCAT 13 13 cecesaecrecar 1 Mcswiggen JA, BLATT L. MCSWIGGEN J A. (ROBE/) ROBERTS E. (PAVO/) PAVO P A. (MACE/) MACEJACK D. WPI; 2002-215899/27 Hepatitis C virus. US2002013458-A1. 23-MAR-1999; 22-SEP-2005 31-JAN-2002 AEB76567; Blatt L, (BLAT/) (MCSW/) RESULT 124 **AEB76567**, g ठ

The invention relates to an enzymatic nucleic acid molecule which specifically cleaves minus strand RNA derived from hepatitis C virus (HCV). The binding arms of the molecule comprise ribozyme sequences. The molecule is selected from inozyme, G-cleaver, DNAzyme, Amberzyme, and Zinzyme motifs. Also described: (1) a pharmaceutical composition comprising the novel enzymatic nucleic acid; (2) a mammalian cell cincluding the novel enzymatic nucleic acid; (3) an expression vector comprising a nucleic acid sequence encoding at least one enzymatic comprising a nucleic acid sequence encoding at least one enzymatic comprising a nucleic acid sequence encoding at least one enzymatic comprising a nucleic acid molecule, in a manner, which allows expression of that methods for treating or repression of that complex comprises or the methods for treating a patient or hepatocallular carcinoma conference (1); (4) a method of treating a patient having a condition associated with HCV infection, by contacting cells of the patient with the nucleic acid molecule, and further employing one or more drug the nucleic acid molecule, and further employing one or more drug colleaving a separate RNA molecule by contacting the novel enzymatic coll with the separate RNA molecule. The enzymatic nucleic acid is useful for modulating the expression and/or replication of hepatitis C virus (HCV), and for inhibiting the expression of HCV minus strand. The course colleaving a patient. The present sequence represents an HCV halppin ribozyme target substrate sequence represents an HCV was exemplification of the present invention. ö Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its Human; antisense; lung dysfunction; nasal airway dysfunction; antinflammatory steroid; ubiquinone; antinflammatory; antiallergic; antiasthmatic; hypotensive; fumunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. Gaps Aguilar D; ö Score 9.8; DB 1; Length 14; Pred. No. 1.3e+02; 0; Mismatches 2; Indels Human adenosine Al receptor antisense fragment no.751. Pabalan J, Sequence 14 BP; 3 A; 5 C; 4 G; 0 T; 2 U; 0 Other; Katz E, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; ABZ94888 standard; DNA; 14 BP. 61.3%; 84.6%; 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P. (EPIG-) EPIGENESIS PHARM INC. 17-OCT-2003 (first entry) 1 CGGCGGCGCCAT 13 Local Similarity 84.6 les 11; Conservative CGGCGAGCTGCAT 1 WPI; 2003-229219/22. WO200285308-A2. Homo sapiens. 31-OCT-2002. Miller S, ABZ94888; 13 Nyce JW, Query Match RESULT 125 AB294888

IID AB29

XX XX XX

XX XX AB29

DI Huma

XX Anti

YX Ant 88888888888888888888888888888888 ð 셤

corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or

Disclosure; SEQ ID NO 10130; 872pp; English.

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonuclectide antisense to the intiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, 5' or 2' end genomic flanking regions, 5' and 3' intron-exon junctions or regions within 2-10 nuclectides of junctions of genes encoding a polypeptide associated with lung and/or nasal alraway dysfunction and a second active agent comprising an antiinflammatory, antiallergic, antiaethmatic, hypotensive, has antiinflammatory, antiallergic, antiaethmatic, hypotensive, conserving a respiratory, lung or mallignant disease or condition, also preventing a respiratory, lung or mallignant disease or condition, also antiinflammatory steroid in a subject, for reducing or depleting levels of or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject, to rreducing levels of ubiquinone or lung inflammation, lung allergies, or a respiratory disease or condition.

Note: The sequence data for this patent is not represented in the printed set with a subject of a respiratory disease or condition.

Specification, but was obtained in electronic format directly from MIPO a first wing or a respiratory first wing a respiratory first wing or a respiratory first format directly from will be the sequence data for this patent is not represented in the printed and printed and the printed and ftp.wipo.int/pub/published_pct_sequences

Sequence 14 BP; 2 A; 3 C; 8 G; 1 T; 0 U; 0 Other;

61.2%; Score 9.8; DB 1; Length 14; 84.6%; Pred. No. 1.3e+02; tive 0; Mismatches 2; Indels 3 GCGGCGGCATCG 15 1 GAGGCGGCATGG 13 Local Similarity 84.6 tes 11; Conservative Query Match Best Loc Matches g ò

ö

Gaps

; 0

ABD18736 standard; DNA; 14 BP. (first entry) 29-JUL-2004 ABD18736; RESULT 126 ABD18736

Human adenosine Al receptor oligonucleotide fragment 751.

Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthatic; analgesic; hyposensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.

Homo sapiens.

WO200285309-A2.

31-OCT-2002

23-APR-2002; 2002WO-US013143.

24-APR-2001; 2001US-0286036P.

(EPIG-) EPIGENESIS PHARM INC.

Aguilar D; Pabalan J, Li Y, Sandrasagra A, Katz E, Tang L, Shahabuddin S; Nyce JW, I Miller S,

WPI; 2003-093058/08

This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstruction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, creducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regularing expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung expression of active of the composition also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonuclootides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to inorease the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or bronchoconstriction and/or lung inflammation, allergies and/or bronchoconstriction and/or lung inflammation, allergies and/or bronchoconstriction and/or uniflammation, allergies and/or bronchoconstriction and/or bronchoconstriction and or candition such as pulmonary vasoconstriction, transplantation rejection, pulmonary infections bronchities or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that interest adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to ö Gapa Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and ö 61.2%; Score 9.8; DB 1; Length 14; 84.6%; Pred. No. 1.3e+02; ive 0; Mismatches 2; Indels Sequence 14 BP; 2 A; 3 C; 8 G; 1 T; 0 U; 0 Other; Claim 15; SEQ ID NO 10130; 763pp; English. Local Similarity 84.6 les 11; Conservative bronchodilating agent. Query Match Matches

3 GCGGCCGCATCG 15 1 GAGGGCGCCATGG 13 ઠે 셤

AAV47255 standard; DNA; 11 RESULT 127

BP.

10-NOV-1998 (first entry) AAV47255;

Antisense oligonucleotide 755, targeting adenosine Al receptor.

Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.

Homo sapiens. Synthetic.

Location/Qualifiers Key modified_base

/*tag= a /note= "contains phosphorothioate internucleotide linkages"

WO9823294-A1

```
26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV47292;
                                                                               Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV47292
  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                         Sequences AAV46501-V47446 are anti-sense oligonuclectides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonuclectides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonuclectides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-transmembrane segments. These oligonuclectides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung prevent conditions associated with bronchoconstriction and/or lung.
                                                                                                                                                                                                                                                                                                                                                                               inflammation in humans or other animals e.g. asthma, pulmonary disease, 
illergy, emphysema and cystic fibrosis
                                                                                                                                                Treating respiratory disease with antisense sequences directed against adenosine or bradyknin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Secondary structure, mRNA, phosphorothioate backbone, G-protein, bronchoconstriction, lung inflammation, asthma, pulmonary disease, allergy, emphysema, cystic fibrosis, ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .11
/*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                              .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antisense oligonucleotide 735, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                      58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                Seguence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                        Claim 12; Page 8-24; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV47235 standard; DNA; 11 BP.
                                 97WO-US022017
                                                                             (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GAGGGCGCAT 11
                                                                                                                                                                                                                                                                                                                                                                                           allergy, emphysema and
                                                                                                                          WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9823294-A1
                                26-NOV-1997;
                                                        26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-NOV-1998
          04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAV47235;
                                                                                                    Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Loc
Matches
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequences AAV45501-V47446 are anti-sense oligonucleotides that target the human adenosine AI receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                               Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inflammation in humans or other animals e.g. asthma, pulmonary disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antisense oligonucleotide 792, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 9.4; DB 1; Length 11;
Pred. No. 1.18+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 11 BP; 2 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      allergy; emphysema; cystic fibrosis; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 12; Page 8-24; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP.
97WO-US022017
                                                                  96US-00757024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97WO-US022017.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAV47292 standard; DNA; 11
                                                                                                                                    (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 90.9'
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGAGGGGGCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGCGGGCGCCA
                                                                                                                                                                                                                                                                 WPI; 1998-322464/28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
modified_base
   26-NOV-1997;
                                                              26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-JUN-1998.
```

Wed May 10 10:49:51 2006

```
17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX53612
       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Containing either a junction between the intron and exon, or where targetes were targeted and used to secure. The adenosine receptor mRNA secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure of this targets mRNA. The adenosine receptor mRNA secondary coligonucleotides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7. Cransmembrane segments. These oligonucleotides can be used to treat or transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung containing in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                               Treating respiratory disease with antisense sequences directed against adenosine or bradyknin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                     Claim 12; Page 8-24; 47pp; English
                         96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAX53632 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97US-0059160P
                                                                      (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGGCGCCATGG 11
                                                                                                                                                                  WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               prostate cancer; ss
                      26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAX53632;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                     Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
$X $\frac{\pi}{2} \frac{\pi}{2} \frac{\pi}{2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, gene initiation

Codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'

codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'

codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'

codons of RNAs encoding proteins associated with one or more diseases,

conditions or mixtures. The antisense oligonucleotides may be derived

from sequences AAX5512-74. These multiple target oligonucleotides

conditions or mixtures. Typical diseases and conditions are those

diseases and conditions. Typical diseases and conditions are those

associated with impaired respiration and inflammation, including lung

diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,

caute asthma, allergies, asthma, impeded respiration, respiratory

diseases (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g.

colon cancer, breast cancer, lung cancer, pancreatic cancer,

colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases,

well as all types of cancers which may metastasize or have metastasized

conditions of the lungs, including breast and prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; inflameded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                           New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX53612 standard; DNA; 11 BP.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-US019419.
                                                                             (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GAGGCGCCAT 11
                                                                                                                                                                                                                                             WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     prostate cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                          vasoconstriction,
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX53612;
                                                                                                                                                               Nyce JW;
```

```
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The specification describes antisense oligonucleotides (AAX52869-X55271)
directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, coding and
non-coding regions of RNAs corresponding to target genes, gene initiation
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
end and the juxta-section between coding and non-coding regions and all
segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
(specifically AAX55180-271) can be used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, respiratory
clistens syndrome, pain, oystic fibrosis, pulmonary hypertension,
pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary
disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, panorealic cancer,
pulmonary various and panorealic cancer,
pulmonary vasoconstrictions
colon cancer, breast cancer, lung cancer, panorealic cancer,
pulmonary vasoconstrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Datocellular carcinoma, kidney cancer, melanoma, hepatic metastases, a lass all types of cancers which may metastasize or have metastasized the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Antisense oligonucleotide, multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; allergic rhinitis; acute asthma; allergy, asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary bypertension; pulmonary vasconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                 New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 11 BP; 2 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                              Disclosure; Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hepatocellular carcinoma, kidney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX53669 standard; DNA; 11 BP.
             97US-0059160P.
98US-00093972.
                                                          (UYEC-) UNIV EAST CAROLINA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 90.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGCGGCCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGAGGGCGCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              prostate cancer; ss.
                                                                                                                     WPI; 1999-229400/19
                                                                                                                                                                  vasoconstriction.
             17-SEP-1997;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX53669
                                                                                        Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAX53669
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
```

```
directed against at least 2 mRNAs selected from target genes, coding and codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-cedons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-cedons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-cedons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-cedons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-cedons mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target oligonucleotides med for the antisense creatment of specifically AAX55180-27] can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions. Typical diseases and conditions, including lung diseases, pulmonary vasoconstriction, inflammation, allergic thinitis, cutte asthma, allergies, asthma, impeded respiration, respiratory diseases syndrome, pain, cystic fibrosis, pulmonary hypertension, culmonary vasoconstriction, inflammation, respiratory disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancratic cancer, pancer, metastasize or have metastasized the land of the land of the land of the major of the land of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             specification describes antisense oligonucleotides (AAX52869-X55271)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antiallergic, artiasthmatic; cytostatic; analgesic; impaired airway;
lung disease; ischaemic condition; pulmonary vasoconstriction; asthma;
respiratory distress syndrome; pain; cystic fibrosis; emphysema;
pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; adenosine receptor; low adenosine antisense oligonucleotide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 9.4; DB 1; Length 11; Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Low adenosine antisense oligonucleotide SEQ ID NO:801.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA33112 standard; DNA; 11 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58.7%;
98WO-US019419
                                                                                                97US-0059160P
                                                                                                                                                    98US-00093972.
                                                                                                                                                                                                                                                    (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   s geccecarce 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGCGGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
7-SEP-1998;
                                                                                                17-SEP-1997;
                                                                                                                                                         09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA33112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                     Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 133
```

ngs20.res

Homo sapiens.

```
The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or ancleic acids involved in bronchoconstriction, allergies, and/or confidence acids involved in bronchoconstriction, allergies, and/or antisathmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary ceffects afflict the lungs of a subject. They can be used for treating e.g. ischemmic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive culmpeded respiration, respiratory distress syndrome, pain, cystic fibrosis, and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the CONs reduces side effects. The A-containing ONs break down with the correspond to SEQ ID NO:1 to 2815, and then the last 185 content on which correspond to SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 1860 (AAA31392) are specifically claimed ONs from the present invention. N:B. Sequences given in the disclosure of the present invention do not match iterian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; adenosine receptor; low adenosine antisense oligonucleotide;
phosphorothioate; impaired respiration; inflammation; allergy;
allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
                                                                                                                                                                                                                                             New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Low adenosine antisense oligonucleotide SEQ ID NO:764.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                            Claim 18; Page 366; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA33075 standard; DNA; 11 BP.
                       99WO-US017712.
                                                                   98US-0095212P.
                                                                                                           (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGGCGGCATGG 11
                                                                                                                                                                                                   WPI; 2000-205971/18.
                                                                   03-AUG-1998;
                       03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA33075;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                         Nyce JW;
                                                                                                                                                                                                                                                                                                                   cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 134
ð
```

```
The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets conditions arise involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiniflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation. The ON can have antiminated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating c.g., impaired airways, including lung diseases and diseases whose secondary impaired conditions, pulmonary hypertension, emphysema, chronic obstructive impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the conchoconstriction and inflammation. AAA32313 to AAA35312 represent the crelease of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the cinvention, which correspond to SEQ ID NO:1 to 1885, but the sequences given in the sequences (from the previously named sequences. SEQ ID NO:1 to 1885, but the great invention. N.B. Sequences given in the disclosure of the present invention. N.B. it is not the interpretation of the present invention. N.B. it is not the disclosure of the present invention. N.B. it is not the sequences given in the disclosure of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy;
                                                                                                                                                                                                                                                                                                                                                    New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Low adenosine antisense oligonucleotide SEQ ID NO:744.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 18; Page 362; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВР.
                                                                                                                                                                                    98US-0095212P.
                                                                                                                                           99WO-US017712.
                                                                                                                                                                                                                          (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA33055 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GAGGGCGGCAT 11
                                                                                                                                                                                                                                                                                                               WPI; 2000-205971/18.
                                                          WO200009525-A2
                                                                                                                                           03-AUG-1999;
                                                                                                                                                                                    03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-JUL-2000
                                                                                                    24-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAA33055;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                     Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                       cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAA3305
XXX6X6X6X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           용
```

19-MAY-2000 (first entry)

```
The present linearious describes a new composition computerion to the present linearious describes a new composition to the compositions of inflammation. The Own of an have antiinflammatory, antialleragics and/or antiasthmatic, cytostatic and analgesic activities. The compositions are inflammation. The Own can have antiinflammatory, antialleragic.

C antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary of feets afflict the lungs of a subject. They can be used for treating of e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, distress syndrome, pain, cystic fibrosis, pulmonary hypertension, and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including brass and prostate cancer. The reduction of the adenosine content of the carcinomas, and effects. The A-containing ONs break down with the release of deoxyadenosine which activates adenosine receptors causing conchoconstruction and inflammation. AAA3313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 185, but the sequence of from the previously match of the present invention. N B. Sequences given in the disclosure of the present invention. N B. Liberton of the previously match of the present invention. N B. Liberton of the previously match of the present invention. N B. Liberton of the previously match of the present invention. N B. Liberton of the previously matched the previous given in the disclosure of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         present invention describes a new composition comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 9.4; DB 1; Length 11; Pred. No. 1.1e+02; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 11 BP; 2 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 18; Page 359; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA03471 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                               99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                              98US-0095212P
                                                                                                                                                                                                                                                                                                                                                                                                                            (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGGGGGGCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                            WO200009525-A2
                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                            03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                              03-AUG-1998;
                                                                                                                                                                                                                                                                             24-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA03471;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA0347
     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
```

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine Aza receptor agonist (Ia), or an oligonucleotide.

(Ib), containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic (Antient is antisense to target genes or corresponding RNA, to genomic (Antient is antisense to target genes or corresponding RNA, to genomic (Antient is antisense to target genes or corresponding the adenosine Al, Aza, Azb or Al acceptors, and has Al, Azb or Al agonist activity or Aza antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure compositions are associated with ischeemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia; (adult) respiratory distress syndrome (e.g. associated with sepsie); allergic rhinitis; chronic obstructive or contains and one or more surfaced with isoner, administration of drugs or imaging agentiactory distress syndrome (e.g. associated with sepsie); allergic rhinitis; chronic obstructive or contains and 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02719, AAA02721 and AAA02723 to AAA03715 represent specifically claimed phosphorothioate antisense oligonuclectides for use in the composition of the present invention. AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other phosphorothioate oligonuclectides used in the exemplification of the
                                                                                              Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine Aza receptor; adenosine Ab receptor; adenosine As receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                            Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:755.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 9.4; DB 1; Length 11;
Pred. No. 1.1e+02;
); Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 17; Page 35; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0088501P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0088657P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGCGCCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGGCGCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present invention
                                                                                                                                                                                                                                                                                                                    sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               renal injury.
                                                                                                                                                                                                                                                                                                                                                                                               WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loca
Matches
                                                                                                                                                                                                                                                                                                                       Ношо
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ద
```

3 GCGGGCGGCAT 13

ठ

```
Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                        adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endoroxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                              Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:718.
                                                                                 adenosine Al receptor; antisense oligonucleotide; hypoxia;
                                                                                                                                                                                                                                                                                                                                                                   Claim 17; Page 34; 252pp; English.
       AAA03434 standard; DNA; 11 BP
                                                                                                                                                                                                                          99WO-US012775
                                                                                                                                                                                                                                           98US-0088501P
                                                                                                                                                                                                                                                     98US-00093972.
                                                                                                                                                                                                                                                                               (EPIG-) EPIGENESIS PHARM INC.
                                           (first entry)
                                                                                                                                                                                                                                                                                                                    WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                   Nyce JW, Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   present invention
                                           19-MAY-2000
                                                                                                                                                          sapiens.
                                                                                                                                                                                                                                                                                                                                                  injury.
                                                                                                                                                                                     WO9963938-A2
                                                                                                                                                                                                                          08-JUN-1999;
                                                                                                                                                                                                                                                              09-JUN-1998;
                                                                                                                                                                                                                                           08-JUN-1998;
                                                                                                                                                                                                       16-DEC-1999
                                                                                                                                                                                                                                                      09-JUN-1998
                                                                                                                                                                 Synthetic.
                          AAA03434;
                                                                                                                                                                                                                                                                                                                                                 renal
AAA03434
```

```
AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other
phosphorothioate oligonucleotides used in the exemplification of the
                                                                                                                                                                                           Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
```

ö

0; Gaps

1; Indels

0; Mismatches

Query Match 58.7%; Best Local Similarity 90.9%; Matches 10; Conservative

Score 9.4; DB 1; Length 11; Pred. No. 1.1e+02;

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine A2a receptor agonist (Ia), or an oligonucleotide (Ib), containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (i.e. 5, or 3 segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 agonist activity or A2a antagonist activity at this receptor? (I) may be a mixture of and (1b), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tradycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02711, AAA02721 and AAA07723 to AAA03715 represent specifically claimed phosphorothicate antisense oligonucleotides for use in the composition of the present invention. AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other phosphorothicate oligonucleotides used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                        Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine A3 receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; AMDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                     Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:698.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 17; Page 34; 252pp; English.
                                                                                                        AAA03414 standard; DNA; 11 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0088501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-00093972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0088657P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                             (first entry)
  GAGGCCGCCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nyce JW, Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens.
                                                                                                                                                                                          19-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9963938-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      renal injury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                  AAA03414;
                                                                                    AAA03414
                                                              RESULT
용
```

XS

셤

ò

ö

```
8888888888888888
                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense cligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides and compositions (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/trespiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system peptide transmitters, defensine, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The
                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Low adenosine antisense oligonuclectide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pain; cystic fibrosis; allergic rhinitis; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                  Gaps
                                                                                                ;
0
                                                           Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                Human adenosine Al receptor polynucleotide fragment #744.
                                                                                              1; Indels
                  BP; 2 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                     58.7%; Score 9.4; DB 1; 90.9%; Pred. No. 1.1e+02; iive 0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 14; Page 117; 1592pp; English.
                                                                                                                                                                                                                                                                             AAF19177 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                         Local Similarity 90.5
nes 10; Conservative
                                                                                                                                       2 GGCGGGCGGCA 12
                                                                                                                                                                            1 GGAGGGCGCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYEC-) UNIV EAST (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200062736-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                           14-MAR-2001
                    Sequence 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancer; ss
                                                                                                                                                                                                                                                                                                                    AAF19177;
                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW;
                                                                                                                                                                                                                                    RESULT 139
                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                      AAF1917
```

```
antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections. bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polymucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes low adenosine (A) content antisense oligonuclectides and compositions (I) comprising them. In the antisense oligonuclectides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 9.4; DB 1; Length 11;
Pred. No. 1.1e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human adenosine Al receptor polynucleotide fragment #801.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 11 BP; 2 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 14; Page 118; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-0127958P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 90.5%,
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF19234 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ĠĠAĠĠĠĠĠĠĊĂ 11
                                                                                                                                                                                                                                                                                                                                                                                                                                             the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGCGGGCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF19234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF19234
```

```
The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with Lung/respiratory disorders and malignancies, such as stimulating and activating poptide factors and renamitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokines receptors, adenosine receptors, bradykinin receptors, central nervous system peripheral nervous and non-nervous system nervous system peripheral nervous and non-nervous system peripheral nervous and non-nervous system receptors, thinding proteins and malignancy associated proteins. The receptors, binding proteins and malignancy associated proteins. The attense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(les) and/or condition and for are associated with a disease or condition and for bronchoconstriction and for are associated with a disease or conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cyetic fibrosis (CP), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (CODD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
```

; 0 58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other; 10; Conservative 5 GGCGGCATCG 15 Best Local Similarity Query Match Matches ઠે g

ö

AAF19197 standard; DNA; 11 BP. AAF19197; 141

Human adenosine Al receptor polynucleotide fragment #764. 14-MAR-2001 (first entry)

Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antihnflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; cancer; ss.

Homo sapiens.

WO200062736-A2.

26-OCT-2000

24-MAR-2000; 2000WO-US008020.

99US-0127958P 06-APR-1999;

(UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.

Ayce JW;

WPI; 2000-679539/66.

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (C) immunosuppressive, antiasthmattc, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmattc, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmattc, bronchodilator, antiinflammatory, analgesic, compression and or activity of target polypeptides associated with undyrespiratory disorders and malignancies, such as stimulating and cativaring peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokines, adhosion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, binding proteins, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system peptide creeptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including replyratory obstruction (especially pulmonary obstruction of surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, callergic fibrosis (CP), allergic rhinitis (AR), pulmonary condition energe experience of conditions elected from pulmonary vasoconstriction, inflammation, callergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CP), allergic rhinitis (AR), pulmonary transplantation rejection, pulmonary disease (CPPD), pulmonary transplantation rejection, pulmonary disease (CPPD), pulmonary invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                           Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                              Claim 14; Page 117; 1592pp; English.
                                                                                and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 90.9
nes 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GCGGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GAGGCGGCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

Human adenosine Al receptor antisense fragment no.754. 17-OCT-2003 (first entry) ABZ94891;

BP.

ABZ94891 standard; DNA; 11

RESULT 142

ABZ94891

antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. Human; antisense; lung dysfunction; nasal airway dysfunction;

Homo sapiens.

WO200285308-A2.

31-OCT-2002.

23-APR-2002; 2002WO-US013135

```
The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation coodon, coding region, 5 or 3 end genomic flanking regions, 5 and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal alrawy dysfunction and a second active agent comprising an entiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing the prophylactic or therapeutic respiratory also feet of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine antiinflammatory storoid in a subject, for reducing levels of increasing levels of adenosine and a subject, increasing levels of adenosine and a subject, increasing levels of adenosine or levels of an antiinflammatory storoid levels of an expect of an antiinflammatory storoid in a subject, for reducing levels of an expect of an antiinflammatory storoid in a subject, for reducing levels of an expect of an e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                    Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lung surfactant in a subject's tissue, or treating bronchoconstriction, ung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; antisense; lung dysfunction; nasal airway dysfunction; antinflammatory steroid; ubiquinone; antinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cycostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                  Katz E, Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human adenosine Al receptor antisense fragment no.791.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; SEQ ID NO 10133; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ftp.wipo.int/pub/published_pct_sequences
                                                                                                               Sandrasagra A, K
L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABZ94928 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-APR-2002; 2002WO-US013135.
24-APR-2001; 2001US-0286137P.
                                                       (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 GAGGGCGCCAT 11
                                                                                                                                                                                                     WPI; 2003-229219/22.
                                                                                                               Li Y, Sar
Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-0CT-2003
                                                                                                                                                                                                                                                                                                                                            ubiquinone.
                                                                                                                                             Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABZ94928;
                                                                                                                     3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                                     Nyce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABZ94928
     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
```

```
The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation coodon, coding regaion, 5' or 3' end ganomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entilellammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallargic, antiasthmatch, hypotenaive, immunosuppressive, and cytostatic activity. The composition may have a use an antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing levels of adenosine receptor, producing bronchodilation, increasing levels of denosine receptor, producing bronchodilation, increasing levels of undialization, increasing levels of undialization.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                            Pharmaceutical composition for treating ailments associated with impaired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human, antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiathmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
                                                                                                                                                                                                 respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                           Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor antisense fragment no.734.
                                                                             Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID NO 10170; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lung inflammation; respiratory disease; ds
                                                                             Katz E,
                                                                           Li Y, Sandrasagra A, K.
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-APR-2002; 2002WO-US013135
24-APR-2001; 2001US-0286137P.
                                     (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABZ94871 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 90.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGGCGGCATGG 11
                                                                                                                                      WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-0CT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-OCT-2002.
                                                                                                                                                                                                                                         ubiquinone.
                                                                                              Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABZ94871;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                             Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABZ9487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
```

```
first active agent comprising an oligomorlectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nuclectides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an national and second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing levels of antiinflammatory steroid in a subject, for reducing levels of cof, or reducing sensitivity to adenosine, receptor, producing bronchodilation, increating bronchoconstriction, lung in the sense of the subject of the respiratory is a subject of the composition of the sense of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel pharmaceutical composition, which has
                                                                                                                                                                                                                                                                                                           Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 11 BP; 2 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; SEQ ID NO 10113; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                           Katz E,
                                                                                                                                                                                                                                                                                    Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
24-APR-2001; 2001US-0286137P.
                                                                                                                                          (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                    Nyce JW, L
Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ubiquinone
```

```
ABD18719;
                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 146
                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABD18715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory districtses syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
                                                                     Gaps
                                                                     ö
     58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human adenosine Al receptor oligonucleotide fragment 754.
                                                                                                                                                                                                                                                                                                                ABD18739 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
Query Match
Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                      2 GGCGGGCGCA 12
                                                                                                                                                                           1 GGAGGGCGCCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                           29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                       ABD18739;
```

RESULT 145 ABD18739

셤 ઠે

WO200285309-A2 Homo sapiens

31-OCT-2002

ô

```
analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target bolypeptide present in the lungs. The pulmonary obstruction, and/or bronchocomstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to the content of the content of the anti-sense oligos corresponding to the content of the content of the corresponding to the content of the corresponding to the content of the corresponding to the corresponding to the content of the corresponding to the corresponding t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine ensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The surfactant depletion or hyposecretion, when administered to a mammal. The surfactant of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              thymidines present in the target RNA serves to prevent the breakdown of
the oligonucleotides into products that free adenosine into the system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                 Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                 Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor oligonucleotide fragment 734.
                                                                                                                                                                                                 Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 15; SEQ ID NO 10133; 763pp; English.
                                                                                                                                                                                              Katz E,
                                                                                                                                                                                       Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
23-APR-2002; 2002WO-US013143.
                                                               24-APR-2001; 2001US-0286036P.
                                                                                                                              (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABD18719 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 90.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGGCGCCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                 bronchodilating agent.
                                                                                                                                                                                                                                                                                        WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-JUL-2004
                                                                                                                                                                                       Nyce JW, I
Miller S,
```

ngs20.res

```
comportang oligonucleotides, effective for alleviating bronchoconstruction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depoletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, with a disease or condition such as pulmonary vasoconstriction, distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary threspiration rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligoncleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       novel composition (a) a first active agent,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            oligonucleotide containing less percentage of adenosine, targeted unucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pabalan J, Aguilar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pharmaceutical composition for treating asthma, has antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 15; SEQ ID NO 10113; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Katz E,
                                                                                                                                                                                                 pulmonary transplantation rejection; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sandrasagra A, Ka
i, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-APR-2001; 2001US-0286036P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention describes a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Li Y,
Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                WO200285309-A2
                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
```

```
Gaps
                                                                              ö
                                    58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
Sequence 11 BP; 2 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                        Local Similarity 90.5
les 10; Conservative
                                        Query Match
                                                            Best Loc
Matches
```

ö

2 GGCGGGCGCA 12

ઠે

GGAGGGGGGCA 11

BP. ABD18776 standard; DNA; 11

ABD18776;

(first entry) 29-JUL-2004

Human adenosine Al receptor oligonucleotide fragment 791.

respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallaregic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. Human; antisense; bronchoconstriction; allergy; hyposecretion; pain;

Homo sapiens.

WO200285309-A2.

31-OCT-2002.

23-APR-2002; 2002WO-US013143.

(EPIG-) EPIGENESIS PHARM INC.

24-APR-2001; 2001US-0286036P.

Pabalan J, Aguilar D; Katz E, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; Miller S, 3 Nyce

WPI; 2003-093058/08.

t 0 Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted tnucleic acids associated with lung airway or lung dysfunction, and bronchodilating agent.

Claim 15; SEQ ID NO 10170; 763pp; English.

This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, cuffactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung dystunction also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antialfammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered corpulmonary obstruction, and/or bronchoconstriction and/or lung containers of target polypeptide present in the lungs. The cull administered corpulmonary obstruction, and/or bronchoconstriction are associated with a disease or conditions such as pulmonary vasoconstriction, contained as asthma, impeded respiration, respiratory disease, pulmonary contained or contained of the efficient of the pulmonary contained of the efficient of efficie transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it

S

δ 셤

```
12 GGCGGCGTCGT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-NOV-1997;
                                                                                                                                                                                                                                   10-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                   AAV47291;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nyce JW;
                                                                                    RESULT 149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                           셤
                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence encodes peptide which may be joined to the N-terminal of polypeptides which have factor Xa inhibition activity. These peptides are based on a wild type sequence which coincides with part of the amino acid sequence of urinary trypsin inhibitor (UTI) or Bikunins (HI-30). It is different to both of these proteins however, in its factor Xa inhibiting activity, substitutions/mutations of the wild type sequence may increase factor Xa inhibiting activity, improve secretion of the polypeptide from the host cell or increase the ability of the protein to inhibit other proteins, eg. elastase. These properties may also be effected by these proteins. These peptides may be used in drug compositions for the prevention and/or treatment of infestation, shock, pancreatitis, is consented by the protein control of the prevention and/or treatment of infestation, shock, pancreatitis, is consented by the prevention and/or treatment of infestation, shock, pancreatitis, is consented by the proteins of the prevention and or the prevention and th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New polypeptide inhibiting protease(s), esp. FXa - used for treating multiple organ failure, shock, pancreatitis, disseminated intravascular
                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Factor Xa; inhibition; urinary trypsin inhibitor; Bikunin; elastase; substitution; mutation; secretion; drug; UTI; infestation; shock; pancreatitis; ischaemic heart disease; rheumatoid arthritis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Factor X inhibiting peptide N-terminal extension coding sequence.
                                                                                                        ö
                                              58.7%; Score 9.4; DB 1; Length 11; 90.9%; Pred. No. 1.1e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 58.7%; Score 9.4; DB 1; Length 12; Best Local Similarity 90.9%; Pred. No. 1.3e+02; Matches 10; Conservative 0; Mismatches 1; Indels
Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 12 BP; 2 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Morishita H, Kanamori T, Nobuhara M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 13; Page 80; 130pp; English.
                                                                                                                                                                                                                                                                                                                        AAQ47316 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92EP-00119083.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91JP-00293472.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MOCH ) MOCHIDA PHARM CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                        Query Match
Best Local Similarity 90.9
Matches 10, Conservative
                                                                                                                                                 5 GGGGGCATCG 15
                                                                                                                                                                                                  GGGCGCCATGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                              (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1993-168945/21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  to correct PN field.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         coagulation, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P-PSDB; AAR39758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-NOV-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-MAY-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                         25-MAR-2003
16-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-NOV-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EP543240-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-MAY-1993.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                             AAQ47316;
                                                                                                                                                                                                                                                                          RESULT 148
                                                                                                                                                                                                                                                                                                 AAQ47316,
```

ö

Gaps

.; 0

6 GGCGCCATCGT 16

```
but a denomine AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary contracture of this targets mRNA. The adenosine receptor mRNA secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense of antisense molecules are created they can be used to target their conference of arget, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-creamembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                     Secondary structure; mRNA; phosphorothicate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= a
/note= "contains phosphorothioate internucleotide
                                                                                                                                                                                                                   Antisense oligonucleotide 791, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 9.4; DB 1; Length 12;
Pred. No. 1.3e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 12; Page 8-24; 47pp; English.
   BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97WO-US022017.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58.7%;
AAV47291 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ĠĠĠĊĠĠĊATĠĠ 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
```

```
Key
modified_base
                                                                                                                                                                                                                                                                                              26-NOV-1997;
                                                                                                                                                                                                                                                                                                                       26-NOV-1996;
                                                                                                                                                        Homo sapiens
                                                10-NOV-1998
                                                                                                                                                                                                                                                 WO9823294-A1
                                                                                                                                                                                                                                                                        04-JUN-1998.
                                                                                                                                            Synthetic
                         AAV47273;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                      Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the artisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or trevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                        Treating respiratory disease with antisense sequences directed against adenosine or bradyknin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                 Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                     /*tag= a
//tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                             Antisense oligonucleotide 713, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 12; Page 8-24; 47pp; English.
                       AAV47213 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                       97WO-US022017.
                                                                                                                                                                                                                                                                                                                                              96US-00757024
                                                                                                                                                                                                                                                                                                                                                                      (UYEC-) UNIV EAST CAROLINA.
                                                                    10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGAGGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-322464/28.
                                                                                                                                                                                                              modified_base
                                                                                                                                                                                                                                                                          WO9823294-A1.
                                                                                                                                                                                                                                                                                                                       26-NOV-1997;
                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                              26-NOV-1996;
                                                                                                                                                                                                                                                                                              04-JUN-1998
                                                                                                                                                                  Synthetic
                                              AAV47213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                             Nyce JW;
RESULT 150
                                                                                                                                                                                                      Key
                                   ð
```

```
Sequences AAV45501-V47446 are anti-sense oligonucleotides that target the human adenosine Al receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and or the provent conditions associated with bronchoconstriction and containing containing containing associated with bronchoconstriction and containing co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Treating respiratory disease with antisense sequences directed against adenosine or bradyknin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Secondary structure; mRNA; phosphorothioate backbone; G-protein, bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                  Antisense oligonucleotide 773, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ВЪ.
BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97WO-US022017.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV47254 standard; DNA; 12
AAV47273 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 90.9
les 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 geeceecaree 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAV47254
ID AAV4
```

ö

RESULT 151

ngs20.res

```
Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine AI receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analyzed and used to construct antisense oligonucleotides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-tream segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors – with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                             Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                 l. .12
**tag= a
/note= "contains phosphorothioate internucleotide
                                                                             Antisense oligonucleotide 754, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 9.4; DB 1; Length 12;
Pred. No. 1.3e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAX53650 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                 97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                               96US-00757024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYEC-) UNIV EAST CAROLINA.
                                              10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                 linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GCGGGGGGAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GAGGGCGCCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                              Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                 26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                               26-NOV-1996;
                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                04-JUN-1998
                                                                                                                                                                              Synthetic
               AAV47254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAX53650;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX53650
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and

con-coding regions of RNAs corresponding to target genes, coding and

codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'

codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'

codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'

codons genomic flanking regions, intron-exon borders, the 5'-end, the 3'

conditions or mixtures. The end is associated with one or more diseases,

conditions or mixtures. These multiple target oligonucleotides

from sequences AAX5512-74. These multiple target oligonucleotides

conditions or mixtures amultiple target oligonucleotides

conditions on mixtures and iseases and conditions are those

casociated with impaired respiration and inflammation, including lung

diseases, pulmonary vasoconstriction, inflammation, allergic thinitis,

caute asthma, allergies, asthma, impeded respiration, allergic thinitis,

diseases syndrome, pain, cystic fibrosis, pulmonary hypertension,

culmonary vasoconstriction, emphysema, chronic obstructive pulmonary

disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g.

colon cancer, becast cancer, lung cancer, pancreatic cancer, pancreans persons and an experience and 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, ewell as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                          Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation, allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatcocallular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                            Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97US-0059160P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-00093972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYEC-) UNIV EAST CAROLINA.
                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5 GGGGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGCGCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                 prostate cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9913886-A1
                         05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce JW;
8
```

ö

AAX53668 standard; DNA; 12 BP.

RESULT 154 AAX53668 ID AAX536

ВЪ.

AAX53590 standard; DNA; 12

(first entry)

05-JUL-1999

AAX53590;

pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; asthma; allergy; asthma; impeded respiration; respiration; allergy; asthma; pain; cystic fibrosis; pulmonary distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;

prostate cancer; ss.

Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; Human adenosine Al receptor antisense oligonucleotide fragment.

8

Page

```
AAX53590
                   The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-71) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis, acute asthma, allergies, asthma, impeded respiration, respiratory diseases (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, pancteatic cancer, pancteatic cancer, beant cancer, pancteatic cancer, pancteatic cancer, pancteatic cancer, pancteatic cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, a
well as all types of cancers which may metastasize or have metastasized
                                                                                                                               Antisense oligonucleotide, multiple target, antisense treatment, impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                             Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ll as all types of cancers which may metastasize the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-0059160P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 58.7%;
Best Local Similarity 90.9%;
Matches 10; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYEC-) UNIV EAST CAROLINA
                                                     (first entry)
                                                                                                                                                                                                                                                                                                                           prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                       W09913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-SEP-1997;
                                                     05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
              AAX53668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW;
```

New antisense oligonucleotides used in treatment of, e.g. pulmonary

98WO-US019419. 97US-0059160P. 98US-00093972.

17-SEP-1998;

WO9913886-A1

Synthetic.

25-MAR-1999,

(UYEC-) UNIV EAST CAROLINA.

09-JUN-1998;

17-SEP-1997;

WPI; 1999-229400/19.

Nyce JW;

Disclosure; Page 38; 120pp; English.

vasoconstriction

```
The specification describes antisense oligonucleotides (AAX52869-X55271)
directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, coding and
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
end and the juxta-section between coding and non-coding regions and all
segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
(specifically AAX55180-271) can be used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
acute asthma, allergies, asthma, impeded respiration, respiratory
distress syndrome, pain, cystic fibrosis, pulmonary hypertension,
colling and allergies asthma, impeded respiration, constructive pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 9.4; DB 1; Length 12;
Pred. No. 1.3e+02;
0; Mismatches 1; Indel8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GGCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGGCGCCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

ö

ö

Gaps

, 0

g δ

1 GAGGCCGCCAT 11

셤

```
New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                   Disclosure, Page 39; 120pp; English.
            AAX53631 standard; DNA; 12 BP.
                                                                                                                                                                 98WO-US019419.
                                                                                                                                                                            97US-0059160P.
98US-00093972.
                                                                                                                                                                                              (UYEC-) UNIV EAST CAROLINA.
                                    (first entry)
                                                                                                                                                                                                                     WPI; 1999-229400/19.
                                                                                                                 prostate cancer; ss.
                                                                                                                                                                                                                                        vasoconstriction.
                                                                                                                                         WO9913886-A1
                                                                                                                                                                 17-SEP-1998;
                                                                                                                                                                             17-SEP-1997;
                                                                                                                                                                                   09-JUN-1998;
                                    05-JUL-1999
                                                                                                                                                     25-MAR-1999
                                                                                                                             Synthetic.
                        AAX53631;
                                                                                                                                                                                                           Nyce JW;
RESULT 156
      AAX53631
```

Claim 18; Page 362; 1343pp; English. The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, coding and
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
end and the juxta-section between coding and non-coding regions and all
segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX5512-74. These multiple target oligonucleotides
conditions or mixtures.
C (specifically AAX55180-271) can be used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases pulmonary vasoconstriction, inflammation, allergic rhinitis,
diseases youlmonery anin, cystic fibrosis, pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary
disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases, as
colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases, as
elled as all types of cancers which may metastasize or have metastasized
to the lungs, including breast and prostate cancer Antisense oligonucleotide, multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;

antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; 88. Human, adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or Low adenosine antisense oligonucleotide SEQ ID NO:763. AAA33074 standard; DNA; 12 BP. 98US-0095212P. 99WO-US017712 (UYEC-) UNIV EAST CAROLINA. (first entry) WPI; 2000-205971/18. WO200009525-A2 Homo sapiens. 03-AUG-1999; 03-AUG-1998; 28-JUL-2000 24-FEB-2000. AAA33074; Nyce JW; cancers. RESULT 157 **AAA3**307

The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which trargets concleted acids involved in bronchoconstriction, allergies, and/or inclaimmation. The ON can have antiniflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating c. impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating c. impaired airways, including lung diseases and diseases whose secondary by the conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive cractionary diseases (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the crasses of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA33313 to AAA33312 represent the invention, which correspond to SEQ ID No:1 to 185, but the sequences differ correspond to SEQ ID No:1 to 185, but the sequences differ corresponding SEQ ID No:1 to 185, but the sequence of from the previously named sequences. SEQ ID No:1 to 185, but the sequence of the previously named sequences. SEQ ID No:1 to 185, but the sequence of the previously named sequences of the present invention. N. B. Sequences given in the disclosure of the present invention. N. B. is a pair to the disclosure of the present invention of the respect of the present invention of listing

Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;

ö

Gaps

. 0

58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels

Best Local Similarity 90.9 Matches 10; Conservative

Query Match

```
oligonuclectide (ON) with low adenosine (Up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of disease associated with inflammation, impalered airways, including lung disease and diseases whose secondary effects affilict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including carcinomas, and cancers which may metastasise to the lungs, including obstacted and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the release of deoxyadenosine which activates adenosine causing
                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bronchoconstriction and inflammation. AAA22313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to AAA33992) are specifically claimed ONs from the present invention. N.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               present invention describes a new composition comprising an antisense
                                                                                                                                                                                                                                                                                                                                                                                                                 Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorochioate; impaired respiration; inflammation; allergy; allergy; disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                               ö
  Score 9.4; DB 1; Length 12;
Pred. No. 1.3e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                               Low adenosine antisense oligonucleotide SEQ ID NO:800.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 18; Page 366; 1343pp; English.
                                                                                                                                                                                                                                               AAA33111 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0095212P
Query Match 58.7%;
Best Local Similarity 90.9%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                 Ξ
                                                                                        3 GCGGGCGGCAT 13
                                                                                                                                    1 GAGGCCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                   28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-FEB-2000
                                                                                                                                                                                                                                                                                        AAA33111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nyce JW;
                                                                                                                                                                                                 RESULT 158
                                                                                                                                                                                                                          AAA33111
                                                                                                                                                                                                                                               ઠે
                                                                                                                                 g
```

```
The present invention describes a new composition could response to the present invention to the present invention to the colligonucleotide (ON) with low adenosine (Up to 15#), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic.

Inflammation. The ON can have antiinflammatory, antiallergic. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic impeded respiration, respiratory distress syndrome, pain, cystic impeded respiration, may metastasise to the lungs, including carcinomas, and cancers which may metastasise to the lungs, including carcinomas, and cancers which may metastasise to the lungs, including content of the ONs reduces side effects. The A-contening ONS break down with the release of deoxyadenosine which activates adenosine receptors causing
                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes a new composition comprising an antisense
Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorochioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                        ö
                                                                                                                            Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02;
                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Low adenosine antisense oligonucleotide SEQ ID NO:722.
                                                                                    Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 18; Page 357; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                BP.
                                                                                                                       58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                AAA33033 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                  Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                5 GGGCGCCATCG 15
                                                                                                                                                                                                                                                        1 ĠĠĠĊĠĠĊĂŢĠĠ 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200009525-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                                                        AAA33033;
                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nyce JW;
                                              listing
                                                                                                                                                                                                                                                                                                                      RESULT 159
                                                                                                                                                                                                                                                                                                                                            AAA3303
883333
                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                      셤
```

```
ö
bronchoconstriction and inflammation. AAA12313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to AAA33929) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention. N.B. up with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antialergic, antiatchmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects affilict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothicate; impaired respiration; inflammation; allergy; allergy; disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; oystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                         58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Low adenosine antisense oligonucleotide SEQ ID NO:782.
                                                                                                                                                                                                                 Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 18; Page 364; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA33093 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0095212P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                               Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                              2 GGCGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                      GGAGGGGGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200009525-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-PEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA33093;
                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cancers.
                                                                                                                                                                           listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 160
    8888888888888
                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                    셤
```

```
ö
           pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the CNB reduces side effects. The A-containing ONB break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID No:1 to 2815, and then the last 185 sequences are also called SEQ ID No:1 to 185, but the sequences differ from the previously named sequences. SEQ ID No:1 to 1860 (AAA3223 to AAA3392) are specifically claimed ONS from the present invention. N.B. Sequences given in the disclosure of the present invention on ont match up with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes a pharmaceutical composition, comprising at least one agent (1) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.
(1) is an adenosine A2a receptor agonist (1a), or an oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  adenosine Aza receptor; adenosine Ab receptor; adenosine Al receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; cupraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:676.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; adenosine Al receptor; antisense oligonucleotide; hypoxia;
                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                    58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                   Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
pulmonary hypertension, emphysema,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0088501P.
98US-00093972.
98US-0088657P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAA03392 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 5 GGCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                    12
                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCCGCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-DEC-1999,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-NUT-098;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA03392;
                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nyce JW,
                                                                                                                                                                                                                                                              listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAA03392
88888888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

```
genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' dends or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine Al, A2a, A2b or A3 receptors, and has Al, A2b or A3 agonist activity or A2a antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and (Ib), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinits; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with actue inflammation. AAA02719, AAA02712 and AAA03713 to AAA03713 represent specifically claimed phosphorothioate antisense coligonucleotides for use in the composition of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel composition for treating or preventing e.g. cardiopulmonary and renal injury.
                                                                                                                                                                                                                                                                                                                                                                                          phosphorothicate oligonuclectides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor. phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:736.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAA03452 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0088501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-00093972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96.06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GGAGGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                 present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9963938-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA03452;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 162
          888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits denosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine A2a receptor agonist (Ia), or an oligomucleotide consistent of a containing less than 15$ adenosine (A), that is antisense to target consistent of genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 receptors, and constants are used to A3 agonist activity or A2a antagonist activity (or at least no agonist activity or A2a antagonist activity (or at compositions are used to prevent, alleviate and/or treat adenosine compositions are used to prevent, alleviate and/or treat adenosine compositions are used to prevent, alleviate and/or treat adenosine composition of drugs or imaging agents, eag adenosine for treating captionary discration of drugs or imaging agents, eag adenosine for treating superaventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive with acute inflammation. AAA02713, where such conditions are associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02721 and AAA02722 and AAA03716 to perseent invention. AAA02718, AAA03718, AAA02722 and AAA03716 to AAA03720 represent of the resent invention of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:754.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 9.4; DB 1; Length 12;
Pred. No. 1.3e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
  Claim 17; Page 35; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA03470 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0088501P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-00093972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0088657P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGCGCCATGG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-DEC-1999,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA03470;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA03470
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

Hill JL;

Nyce JW,

```
RESULT 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF19233
    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits

Cd at least one agent (I) that prevents, alleviates and/or inhibits

Cd denosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine Aza receptor agonist (Ia), or an oligonucleotide

CG (Ib), containing less than 15% adenosine (A), that is antisense to target

CG enes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3'

C nas Al, A2b or A3 agonist activity or A2a antagonist activity (or at

CG ense A1, A2b or A3 agonist activity or A2a antagonist activity (or at

CC ense A1, A2b or A3 agonist activity or A2a antagonist activity (or at

CC ense A1, A2b or A3 agonist activity or A2a antagonist activity (or at

CC enser A1, A2b or A3 agonist activity or A2a antagonist activity (or at

CC ensert of A3 agonist activity at this receptor). (I) may be a mixture of (Ia)

and (1b), and optionally also contains one or more surfactants. The

CC engositions are used to prevent, alleviate and/or release and/or

CC equipositions are used to prevent, alleviate and/or release and/or

CC equipositions of drugs or imaging agents, e.g. adenosine for treating

CS supraventricular tachycardia; (adult) respiratory distress syndrome

CC gharistation of drugs or imaging agents, e.g. adenosine for treating

CS supraventricular tachycardia; (adult) respiratory distress syndrome

CC gharistation actions of maging agents, e.g. adenosine for treating

CC supraventricular tachycardia; (adult) respiratory distress syndrome

CC AAAO3115 represent specifically claimed phosphorothicate antisense

CC AAAO3118, AAAO2720, AAAO3717, AAAO3713 to AAAO3731 to AAAO3718, AAAO3718, AAAO3718, AAAO3718 in the composition of the present invention.

CC AAAO3718, AAAO3722 and AAAO3732 end present other recomposition of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                             composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine As receptor; adenosine As receptor; adenosine As receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoportective; anti-allergic; anti-inflammatory; anti-hypoxic; enpayaventricular tachycatdia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                         Claim 17; Page 35; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA03433 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0088501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCCGCCATGG 11
              WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          present invention
                                                            injury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA03433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                           Novel
                                                             renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA03433
g
```

ò

```
The present invention describes a pharmaceutical composition, comprising at least one agent (1) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

(1) is an ademosine AZa receptor agonist (la), or an oligonucleotide consisting regions or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' cands or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine Al, AZa, AZb or A3 receptors, and compositions are used to receptor). (I) may be a mixture of (la) and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine compositions are used to prevent, alleviate and/or release and/or receptor-mediated cardiac, lung and/or renal damage or failure and/or compositions of darinistration of darges or imaging agents, es. a denosine for treating supraventricularly where associated with ischemia, toxin release and/or contraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); alleggic rhinitis, chronic obstructive with acute inflammation. AAAO2719, AAAO2721 and AAAO3723 to of strees test agents, particularly where such conditions are associated with acute inflammation. AAAO2712, AAAO2721 and AAAO3722 and AAAO3718, AAAO2712, and AAAO3718, AAAO2712, and AAAO3718, cepresent of the present of the composition of the present of the composition of the present of the composition of the conditions are associated in the exemplification of the present of the presen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiathmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58.7%; Score.9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human adenosine Al receptor polynucleotide fragment #800.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВР.
                                                   98US-0088657P.
     98US-00093972
                                                                                                                                               (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 90.5%,
Thes 10, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF19233 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 GCGGGCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGGCGCCAT 11
                                                                                                                                                                                                                                                                                                                                            WPI; 2000-116433/10
                                                                                                                                                                                                                                                Nyce JW, Hill JL;
09-JUN-1998;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF19233;
```

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (C) is an analyse of coligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodiator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. (C) The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with cattoring peptide factors and malignancies, such as stimulating and cattoring peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokine, endogenously produced specific and non-specific enzymes, chemokine receptors, adenosine receptors, bradykinin receptors, central creceptors, and peripheral nervous and non-nervous system correceptors, and peripheral nervous and non-nervous system creceptors, binding proteins and malignancy associated proteins. The creceptors, binding proteins and malignancy associated proteins. The creceptors, binding proteins and malignancy associated proteins. The creceptors binding proteins and malignancy associated proteins. The creceptors binding proteins and malignancy associated proteins. The antisense oligonucleotides and alternation, alterarticion and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or condition and proper and associated with a disease or condition which are associated with a disease or condition and from minimary manders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 14; Page 118; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and respiratory obstructions.
                                                                                                                                                                                                                                              24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                                                                                                   99US-0127958P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (NYCE/) NYCE J W.
WO200062736-A2
                                                                                                                                                                                                                                                                                                                                                                   06-APR-1999;
                                                                                                                    26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce JW;
```

ö Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02; 1; Indels 0; Mismatches AAF19215 standard; DNA; 12 BP. 58.7%; 14-MAR-2001 (first entry) 10; Conservative 5 GGCGGCATCG 15 1 ééécéécArec 11 Query Match Best Local Similarity AAF19215; Matches RESULT 166 XBXAXBX g

ö

Gaps

Human adenosine Al receptor polynucleotide fragment #782.

Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; cancer; ss.

Homo sapiens.

WO200062736-A2.

26-OCT-2000.

24-MAR-2000; 2000WO-US008020.

99US-0127958P. 06-APR-1999;

(UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.

Nyce JW;

WPI; 2000-679539/66.

Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.

Claim 14; Page 118; 1592pp; English.

The present introduced describes low adenosine (A) content antibenies oligomucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antibinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligomucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and ransmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, and peripheral nervous and non-nervous system chemokine receptors, growth factors, bradykinin receptors, central nervous and non-nervous system peptide treceptors binding proteins and malignancy associated proteins. The antisense oligomucleotides may be used in this way to treat disorders and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, entime, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CP), allergic rhinitis (AR), pulmonary (RDS), pain, cystic fibrosis (CP), allergic rhinitis (AR), pulmonary of the antise of the antise of the associated with a disease of the allergies and antise of the associated with a disease of the allergies and antise of the an and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of The present invention describes low adenosine (A) content antisense present invention

Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;

Gaps ; 0 58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; 1; Indels Pred. No. 1.3e 0; Mismatches 10; Conservative Best Local Similarity Query Match Matches

ö

5 GGGGGCCATCG 15

ઠે 셤

GGCGGCATGG 12

ö

```
Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                          Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; busined depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pain; cystic fibrosis; allergic rhinitis; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                        Human adenosine Al receptor polynucleotide fragment #763.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 14; Page 117; 1592pp; English.
                     AAF19196 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                             24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                     99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                       (UYCE/) UNIV EAST CAROLINA.
                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                 WO200062736-A2.
                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                     06-APR-1999;
                                                                 14-MAR-2001
                                                                                                                                                                                                                                                                                     26-OCT-2000
                                                                                                                                                                                                                    cancer; ss.
                                            AAF19196;
                                                                                                                                                                                                                                                                                                                                                                                            Nyce JW;
RESULT 167
```

oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base.

(I can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.

(I can have respiratory) bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities.

The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and mallgnancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokine and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradykinin receptors, central nervous system (CKS) and peripheral nervous and non-nervous system peptide receptors, defensine, growth factors, vasocative peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders and and the hypothemic and the hypothemic and the hypotense oligonucleotides may be used in this way to treat disorders and the hypothemic and hypothemic and the hypothemic and hypothemic and hypothemic and the hypothemic and hypothem and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome The present invention describes low adenosine (A) content antisense

The present invention describes low adenosine (A) content antisense oligonuclectides and compositions (I) comprising them. In the antisense oligonuclectides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonuclectides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with ung/respiratory disorders and malignancies, such as stimulating and cumunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and nervous system (CNS) and peripheral nervous and non-nervous system peptide receptors, contral Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers Low adenosine antisense oligonucleotide, phosphorothioate; allergy, human; airway disorder; bronchoconstriction, lung inflammation; surfactant depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiathmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; fragments and antisense oligonucleotides used in the exemplification of the present invention Gaps ö Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02; 0; Mismatches 1; Indels Human adenosine Al receptor polynucleotide fragment #722. Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other; Claim 14; Page 117; 1592pp; English. BP. and respiratory obstructions. 58.78; 24-MAR-2000; 2000WO-US008020. 99US-0127958P. AAF19155 standard; DNA; 12 (UYEC-) UNIV EAST CAROLINA. 14-MAR-2001 (first entry) Query Match
Best Local Similarity 90.9' 3 GCGGGCGGCAT 13 1 GAGGGCGCCAT 11 WPI; 2000-679539/66. (NYCE/) NYCE J W. WO200062736-A2. 06-APR-1999; Homo sapiens. 26-OCT-2000. cancer; 88. AAF19155; Nyce JW; RESULT 168 AAF19155 ð 셤

ö transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The artisense oligonuclecides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAR18434 to AAR21843 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of Pharmaceutical composition for treating ailments associated with impaired The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. Gaps respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid Aguilar D; ; 0 58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; 1; Indels Human adenosine Al receptor antisense fragment no.753. Pabalan J, Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other; Disclosure; SEQ ID NO 10132; 872pp; English. 0; Mismatches Katz E, Sandrasagra A, Ke L, Shahabuddin S; ABZ94890 standard; DNA; 12 BP. 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P (EPIG-) EPIGENESIS PHARM INC (first entry) Local Similarity 90.9 hes 10; Conservative 2 GGCGGGCGGCA 12 2 GGAGGGCGCA 12 the present invention Li Y, Tang L, WPI; 2003-229219/22. WO200285308-A2 Homo sapiens. 17-0CT-2003 31-OCT-2002 ubiquinone Miller S, ABZ94890; Query Match 3 Matches 88888888888888888888 ò

ö has antinfindmatory, antial programment of the composition may have a use in municosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiniflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to an order of a denosine receptor, producing bronchodilation, increasing levels of adenosine or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this parent is not represented in the printed specification, but was obtained in electronic format directly from WIPO Pharmaceutical composition for treating ailments associated with impaired The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodiation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. antiinflammatory steroid and ubiquinone. A composition of the invention ö Gaps respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid Aguilar D; ; Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02; 1; Indels Human adenosine Al receptor antisense fragment no.772. Pabalan J, Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other; Disclosure; SEQ ID NO 10151; 872pp; English. at ftp.wipo.int/pub/published_pct_sequences 0; Mismatches Katz E, i Y, Sandrasagra A, Ka Tang L, Shahabuddin S; HB. 58.7**%**; 90.9**%**; 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P (EPIG-) EPIGENESIS PHARM INC ABZ94909 standard; DNA; 12 17-OCT-2003 (first entry) 10; Conservative 3 GCGGCCGCAT 13 1 WPI; 2003-229219/22. Best Local Similarity WO200285308-A2 Homo sapiens. 31-OCT-2002. ubiquinone. Miller S, ABZ94909; Query Match Nyce JW, Matches RESULT 17 ABZ94909 8x33333333333333 ઠે 셤

```
antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antialergic, antiasthmatic, hypotensive, immunosupperssive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an infilammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or cumposition, lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO.
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABZ94927 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5 GGCCGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGGGGCATGG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-0CT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABZ94927;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
        88888888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

Human; antisense; lung dysfunction; nasal airway dysfunction; antinflammatory steroid; ubiquinone; antinflammatory; antiallergic; antiastimatic; pypotensive; immunosuppressive; cycostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. Aguilar Human adenosine Al receptor antisense fragment no.790. ii Y, Sandrasagra A, Katz E, Pabalan J, Tang L, Shahabuddin S; 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P. (EPIG-) EPIGENESIS PHARM INC. WO200285308-A2 ፫ Nyce JW, I Miller S,

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an The invention relates to a novel pharmaceutical composition, which has Disclosure; SEQ ID NO 10169; 872pp; English. ubiquinone

```
ö
                                                                                                                                                                                                                                                        lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
             has antiinfiammatory, antializergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an attiinfiammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of adenosine lung surfactant in a subject's tissue, or treating bronchoconstriction,
  A composition of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                         Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                      at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 GGCCGCCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8\pm8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

Human adenosine Al receptor antisense fragment no.712. ABZ94849 standard; DNA; 12 BP. (first entry) 17-OCT-2003 ABZ94849; ABZ94849

7

1 GGCGGCATGG

셤

ö

Gaps

ö

1; Indels

0; Mismatches

58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02;

RESULT 172

Human; antisense; lung dysfunction, nasal airway dysfunction; antiinflammatory; antiallergic; antianflammatory; antiallergic; antianflammatic; hypotensive; dynostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.

23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P WO200285308-A2. Homo sapiens. 31-OCT-2002.

Aguilar D; Pabalan J, Katz B, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; WPI; 2003-229219/22. Miller S, Nyce JW,

(EPIG-) EPIGENESIS PHARM INC

ä

WPI; 2003-229219/22.

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or ubiquinone

Disclosure; SEQ ID NO 10091; 872pp; English.

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an

ö antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, mid cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, Gaps Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted tnucleic acids associated with lung airway or lung dysfunction, and Pabalan J, Aguilar D; ö 58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; Human adenosine Al receptor oligonucleotide fragment 772. 1; Indels Seguence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other; ftp.wipo.int/pub/published_pct_sequences 0; Mismatches Claim 15; SEQ ID NO 10151; 763pp; English. Katz E, Pred. No. i Y, Sandrasagra A, Ka Tang L, Shahabuddin S; ABD18757 standard; DNA; 12 BP. 23-APR-2002; 2002WO-US013143. 24-APR-2001; 2001US-0286036P. (EPIG-) EPIGENESIS PHARM INC. (first entry) Local Similarity 90.5 tes 10; Conservative 2 GGCGGGCGCA 12 2 ĠĠAĠĠĠĠĠĠĠ 12 bronchodilating agent WPI; 2003-093058/08. Li Y, WO200285309-A2 Homo sapiens, 29-JUL-2004 31-OCT-2002 Nyce JW, L Miller S, ABD18757; Query Match RESULT 173 Matches ABD18757 셤 93999999999338ð

Lustructuous tor adailng a carrier and for use of the composition of the invention has antialergic, antihilammatory, antiathmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or bronchoconstriction and assessed or conditions such as pulmonary vasoconstriction, circlinammation, allergies and/or bronchoconstriction, respiratory distress syndrome, pain, cystic fibrosis allergic rhinitis, pulmonary cransplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidism present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition Gaps Aguilar D; ö Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02; Human adenosine Al receptor oligonucleotide fragment 790. 1; Indels Pabalan J, Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other; 0; Mismatches Katz E, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; BP. 23-APR-2002; 2002WO-US013143. 58.7%; 24-APR-2001; 2001US-0286036P (EPIG-) EPIGENESIS PHARM INC ABD18775 standard; DNA; 12 29-JUL-2004 (first entry) Query Match Best Local Similarity 90.9' Matches 10; Conservative GGCGCCATCG 15 2 ĠĠĠĊĠĠĊĂŤĠĠ 12 WO200285309-A2 Homo sapiens. 31-OCT-2002. Miller S, ABD18775; Nyce JW, RESULT 174 ð 셤

WPI; 2003-093058/08

31-OCT-2002.

```
Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted toucleic acids associated with lung airway or lung dysfunction, and
                               Claim 15; SEQ ID NO 10169; 763pp; English.
                      bronchodilating agent.
```

This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, curfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating cyperides are derived from a gene encoding or regulating dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a containers of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a composition comprises oligo and is administered to reduce the production or reating a respiratory, lung or malignant disease. The administered correquently or composition of the target monory obstruction, and/or bronchoconstriction and/or lung correquently allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, and or langer condition such as pulmonary vasoconstriction, and or lung conditions such as pulmonary vasoconstriction, and or candition such as pulmonary disease, pulmonary conditions rejection, onlanged conditions behavior therefore the analyment conditions when the such as pulmonary diseases, pulmonary conditions rejection, onlanged conditions when the analyment conditions when the analyment conditions when the conditions and the conditions are associated to reasonablantation rejection. transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;

58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels Best Local Similarity 90.5 Matches 10; Conservative 5 GGCCGCCATCG 15 Query Match

1 GGGCGGCATGG 11

q

ò

ö

Gaps

; 0

ABD18697 standard; DNA; 12 BP. 29-JUL-2004 (first entry) ABD18697; RESULT 175 ABD18697

Human adenosine Al receptor oligonucleotide fragment 712.

ö

Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammaticy; antiasthamatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory districtses syndrome; allergic thinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.

Homo sapiens.

WO200285309-A2

```
The invention also describes a kit, the oligonucleotides, (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) a delivery device, in separate containers, (b) the oligonucleotides, (c) adelivery contributed a carrier and for use of the kit. The composition of the invention has antialergic, antiinflammatory, antiathmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The cytlamonary obstruction, and/or bronchoconstriction and/or lung or with a disease or condition such as pulmonary vasoconstriction, ciffiammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, ciffiammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary transplantation relection, pulmonary pulmonary disease, pulmonary transplantation relection, pulmonary infections, bronchitis or cancer.

The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This invention describes a novel composition (a) a first active agent,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; antisense; bronchoconstriction; allergy; hyposecretion; pain;
                                                                                                                                                                                                                                                                                                         Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                            Katz E, Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human adenosine Al receptor oligonucleotide fragment 753.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 15; SEQ ID NO 10091; 763pp; English.
                                                                                                                                                                                                                  Shahabuddin S;
                                                                                                                                                                                          Li Y, Sandrasagra A,
Tang L, Shahabuddin
                                               23-APR-2002; 2002WO-US013143.
                                                                                              24-APR-2001; 2001US-0286036P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABD18738 standard; DNA; 12 BP.
                                                                                                                                          (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGGCGCCA 12
                                                                                                                                                                                                                                                                                                                                                                                    bronchodilating agent.
                                                                                                                                                                                                                                                               WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUL-2004
                                                                                                                                                                                                                Miller S,
                                                                                                                                                                                          Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABD18738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABD18738
셤
```

```
This interaction describes a nowest composition, allergies and bronchoconstriction, respiratory tract inflammation, allergies and composite standard adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallargic, antiinflammatory, antiathmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a certaing a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vascometricies, pulmonary ciffaress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary therefore the manner of target plane, allergies and/or surfactant typoproduction are associated with a disease or condition such as pulmonary diseases, pulmonary diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to
respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antibilatlammaticy; antialathmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              invention describes a novel composition (a) a first active agent,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted to nucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 15; SEQ ID NO 10132; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sandrasagra A, Ka
, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                         23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                                                                                                     24-APR-2001; 2001US-0286036P
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li Y,
                                                                                                                                                                                                                                                      WO200285309-A2.
                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                     31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW,
```

```
ВЪ.
                                                                                                                                                                                                     ADW86980 standard; DNA; 12
                                                               Local Similarity 90.8
les 10; Conservative
                                                                                                        1 CGGCGGGCGGC 11
                                                                                                                                 CGGAGGCGGC 12
the present invention.
                                                                                                                                                                                                                              ADW86980;
                                                     Query Match
                                                                                                                                                                          RESULT 178
                                                                               Matches
                                                                                                                                                                                      ADW86980
                                                                                                                                                                                                      RXA
                                                                                                                                  셤
                                                                                                          ઠે
                                                                                                                                                                ö
                                                                                                                                                                Gaps
                                                                                                                                                                ;
                                                                                                                                  58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                   Query Match
Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                         3 GCGGCGGCAT 13
                                                                                                                                                                                                                   GAGGGCGCCAT 11
```

ò

```
The present invention describes an isolated and purified nucleic acid molecule comprising a sequence which codes for a wild-type or mutant autosomal recessive polygystic kidney disease (ARRXD) nucleic acid. Also described: (1) a purified polypeptide comprising the 145, 158 or 165 anino acid sequences of SED NOS:3, 9 and 10, (ADR46852, ADR46858 and ADR46859) respectively; (2) an expression vector comprising a nucleic acid coding for a wild-type or mutant ARRVD nucleic acid operably linked to an expression control sequence; (3) a non-human cell comprising the above expression vector; and (4) producing a polypeptide by culturing the cells comprising the expression vector. The protein and gene associated with ARRVD is cystin (Cysl, previously referred to as cpk). Cysl has nephrotropic activity, and can be used in gene therapy. The Cysl nucleic acids may be useful in gene therapy, and antisense oligonucleotides based on the sequences may also be useful in treating ARRVD. Analysis of mouse and human Cysl transcripts may be used to identify compounds that modulate the expression of the wild type or mutant genes. The present sequence represents a mouse Cysl nucleotide fragment, which is deleted in a mutant Cysl nucleotide sequence, and is given in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New autosomal recessive polycystic kidney disease (ARPKD) nucleic acid molecules and polypeptides useful for diagnosing, preventing or treating
                                                                                                                                                                          autosomal recessive polycystic kidney disease; ARPKD; cystin; Cysl; cpk; nephrotropic; gene therapy; mouse; gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                    Mouse cystin (Cysl) nucleotide fragment SEQ ID NO:4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 11; SEQ ID NO 4; 58pp; English.
              ADR46853 standard; cDNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                               18-FEB-2004; 2004WO-US004778.
                                                                                                                                                                                                                                                                                                                                                                                                     18-FEB-2003; 2003US-0448168P
                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                             (UABR-) UAB RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2004-635536/61.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Guay-Woodford L;
                                                                                                                                                                                                                                                                                 WO2004074302-A2.
                                                                                                                                                                                                                                         Mus musculus.
                                                                                                18-NOV-2004
                                                                                                                                                                                                                                                                                                                         02-SEP-2004.
                                                        ADR46853;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ARPKD.
ADR46853
```

DNA purification; protein engineering; diagnosis;

```
The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to sequence encoding target protein of gene template, where terminal of sequence encoding target protein of gene template, where labeling compound has label portion and acceptor portion having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein. Which involves presence of the labeling compound containing acceptor portion and label portion, and obtaining protein synthesized in the translation system. The base sequence encoding the termination codon. The labeling compound is added after the initiation of the translation, which involves contacting the test substance with (LPI), and analyzing the interaction between the protein and the test substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled the function. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel polynucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence of labeling compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02;
                                                                                        DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                    Protein labelling method sequence #182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein labelling method sequence #50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Fig 20; 140pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                Shiratori M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADW86848 standard; DNA; 12 BP
                                                                                                                                                                                                                                                                         18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                       18-JUN-2004; 2004WO-JP008953.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                            (MITU ) MITSUBISHI CHEM CORP
                  07-APR-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-APR-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 58.7
Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                               Hashimoto H, Sasaki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ceeceeceec 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cedecedecec
                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2005-075248/08.
                                                                                                                                                                                                                                                                                                                                                Nakano H,
                                                                                                                                                             WO2004113530-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the invention.
                                                                                                                            Unidentified.
                                                                                                                                                                                                 29-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADW86848;
                                                                                                                                                                                                                                                                                                                                                Naka D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 179
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *****
```

Kobayashi T, Suzuki K;

```
The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3' terminal of sequence encoding target protein of gene template, where labeling compound has label portion and acceptor portion having compound abeling to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein. (In the greatence of the labeling compound containing acceptor portion and label portion, and obtaining protein synthesized in the translation system. The base sequence encoding the translation coden. The labeling compound is added after the initiation of the translation. The labeled protein (LP1) is useful in a performance-analysis of a protein, which involves contacting the test substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled the contain. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                   polynucleotide having ability to increase labeling efficiency of ing compound, useful for synthesizing labeled protein in presence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 9.4; DB 1; Length 12;
Pred. No. 1.3e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                          Ķ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                      Kobayashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein labelling method sequence #244.
                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig 9; 140pp; Japanese.
                                                                                                                                                                                                                      Shiratori M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                                        18-JUN-2004; 2004WO-JP008953.
                                                                                                                                                         18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                       (MITU ) MITSUBISHI CHEM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADW87042 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-APR-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 90.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CGGCGGGCGGC 11
                                                                                                                                                                                                                                    Hashimoto H, Sasaki T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002000000
                                                                                                                                                                                                                                                                     WPI; 2005-075248/08.
                                                                                                                                                                                                                      Nakano H,
                                                                                                                                                                                                                                                                                                                                     compound
                                                           WO2004113530-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004113530-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unidentified.
                                                                                          29-DEC-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADW87042;
                                                                                                                                                                                                                                                                                                                                  labeling
                                                                                                                                                                                                                      Naka D,
                                                                                                                                                                                                                                                                                                      Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADW87042
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
```

ö

Gapa

ö

Indels

Naka D,

Suzuki K;

```
The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3, terminal of sequence encoding target protein of gene template, where labeling compound has label portion and acceptor portion having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, translating the gene companied containing acceptor portion and label portion, and obtaining protein containing acceptor portion and label portion, and obtaining protein target protein either contains the termination codon or does not contain the termination codon. The labeling compound is added after the
                                                                                                                                                                                                        polynucleotide having ability to increase labeling efficiency of ing compound, useful for synthesizing labeled protein in presence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the termination codon. The labeling compound is added after the initiation of the translation. The labeled protein (LP1) is useful in a performance-analysis of a protein, which involves contacting the test substance with (LP1), and analyzing the interaction between the protein and the test substance. () has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled protein. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 9.4; DB 1; Length 12;
Pred. No. 1.3e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kobayashi T, Suzuki K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                          Kobayashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein labelling method sequence #138.
                                                                                                                                                                                                                                                                                                       Disclosure; Fig 10; 140pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Naka D, Nakano H, Shiratori M,
                                                                                        o H, Shiratori M,
Sasaki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18-JUN-2004; 2004WO-JP008953.
18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (MITU ) MITSUBISHI CHEM CORP.
                                            (MITU ) MITSUBISHI CHEM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADW86936 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ceeeeeeceec 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CGCCGGCGGC
                                                                                                                                                            WPI; 2005-075248/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
les 10; Conserv
                                                                                          Nakano H,
                                                                                                                                                                                                                                                         labeling compound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2004113530-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified.
                                                                                                                  Hashimoto H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-DEC-2004.
                                                                                                                                                                                                                                        ing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADW86936;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                          Ď,
                                                                                                                                                                                                             Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 182
                                                                                            Naka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADW86936
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3, terminal of sequence encoding target protein of gene template, where labeling compound to 3, terminal of sequence encoding target protein of gene template, where labeling compound as label portion and acceptor portion having compound template of binding to C-terminus of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, translating the gene template in the presence of the labeling compound containing acceptor portion and label portion, and obtaining protein either contains the termination codon or does not contain the termination codon. The labeling compound is added after the target protein codon. The labeling compound is added after the preformance-analysis of a protein, which involves contacting the test substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled of protein. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                           Novel polynucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                             Suzuki K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                          Shiratori M, Kobayashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein labelling method sequence #63.
                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Fig 21; 140pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADW86861 standard; DNA; 12 BP.
                                                                  18-JUN-2004; 2004WO-JP008953.
                                                                                                                18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-JUN-2004; 2004WO-JP008953
                                                                                                                                                              (MITU ) MITSUBISHI CHEM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ceeceeecec 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ceeeeeeceec 11
                                                                                                                                                                                                                                Hashimoto H, Sasaki T;
                                                                                                                                                                                                                                                                               WPI; 2005-075248/08
                                                                                                                                                                                                             Nakano H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
Matches 10; Conser
                                                                                                                                                                                                                                                                                                                                                                            labeling compound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2004113530-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-DEC-2004
                   29-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADW86861;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
```

RESULT 181

셤 ð

ö

Gaps

```
##X#XDDDDDDDDDDDDDDDDDDXX
                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a polymucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3' terminal of sequence encoding target protein of gene template, where capable portion and acceptor portion having compound abeling compound has label portion and acceptor protein having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the containing acceptor portion and label portion, and obtaining protein synthesized in the translation system. The base sequence encoding the capacitation coden. The labeling compound is added after the initiation of the translation, which involves contacting the test substance with (LPI), and analyzing the interaction between the protein and the test substance (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled the contain. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                 polynucleotide having ability to increase labeling efficiency of ing compound, useful for synthesizing labeled protein in presence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel polynucleotide having ability to increase labeling efficiency of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                     58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Suzuki K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kobayashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein labelling method sequence #72.
                                                                                                Disclosure; Fig 20; 140pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Shiratori M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADW86870 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-JUN-2004; 2004WO-JP008953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JUN-2003; 2003JP-00173634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MITU ) MITSUBISHI CHEM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-APR-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 90.9
Matches 10; Conservative
 Sasaki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CGGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ||| |||||||
| CGGGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hashimoto H, Sasaki T;
                          WPI; 2005-075248/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2005-075248/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Naka D, Nakano H,
                                                                           labeling compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004113530-A1.
Hashimoto H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-DEC-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADW86870;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 183
ADW86870
                                                                                                                                                                                                                                                                                                                                                                                     the
ò
```

```
The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3' terminal of sequence encoding target protein of gene template, where Including the protein of gene template, where a pabel portion and acceptor portion having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, to the 3'-terminal of base sequence encoding the translating the gene template in the presence of the labeling compound containing acceptor portion and label portion, and obtaining protein synthesized in the translation system. The base sequence encoding the termination codon. The labeling compound is added after the initiation of the translation. The labeled protein (LPI) is useful in a performance-analysis of a protein, which involves contacting the test substance with (LPI), and analyzing the interaction between the protein and the test substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled the forted of protein. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
compound, useful for synthesizing labeled protein in presence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel polynucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence of labeling compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Suzuki K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kobayashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein labelling method sequence #124.
                                                                                                              Disclosure; Fig 10; 140pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Fig 20; 140pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Shiratori M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JUN-2004; 2004WO-JP008953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADW86922 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-APR-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (MITU ) MITSUBISHI CHEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CGGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hashimoto H, Sasaki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2005-075248/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nakano H,
   labeling compound, labeling compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004113530-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-DEC-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADW86922;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Naka D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADW86922
```

The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3, terminal of sequence encoding target protein of gene template, where labeling compound has label portion and translating compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, which involves preparing a gene template in the presence of the labeling compound containing acceptor portion and label portion, and obtaining protein system. The base sequence encoding the target protein either contains the termination codon. The labeling compound is added after the target protein codon. The labeling compound is added after the initiation of the translation. The labeled protein (LPI) is useful in a performance-analysis of a protein, which involves conteating the test substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled the protein. This sequence corresponds to a sequence used in the method of the invention.

Gaps ö 58.7%; Score 9.4; DB 1; Length 12; 90.9%; Pred. No. 1.3e+02; 1; Indels Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other; 0; Mismatches Local Similarity 90.5 hes 10; Conservative 1 CGGCGGGCGC 11 1 cecececece 11 Query Match Matches 8

Protein labelling method sequence #128. ADW86926 standard; DNA; 12 BP. 07-APR-2005 (first entry) ADW86926; RESULT 185

DNA purification; protein engineering; diagnosis; ss. WO2004113530-A1. Unidentified

18-JUN-2003; 2003JP-00173634. 18-JUN-2004; 2004WO-JP008953

29-DEC-2004

(MITU) MITSUBISHI CHEM CORP

Kobayashi T, Shiratori M, Hashimoto H, Sasaki T; Nakano H, Ď Naka

Suzuki K;

WPI; 2005-075248/08.

Novel polynucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence Disclosure; Fig 20; 140pp; Japanese. labeling compound.

of The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3' terminal of sequence encoding target protein of gene template, where labeling compound has label portion and acceptor portion having compound

capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein.

C translating the gene template in the presence of the labeling compound containing acceptor portion and label portion, and obtaining protein grantlesized in the translation system. The base sequence encoding the target protein either contains the termination codon or does not contain the termination codon. The labeling compound is added after the initiation of the translation. The labeled protein (LPI) is useful in a performance-analysis of a protein, which involves contacting the test substance with (LPI), and analyzing the interaction between the protein efficiency of a labeling compound and thus effectively produces labeled to protein. This sequence corresponds to a sequence used in the method of the invention.

Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other;

Gaps ; Length 12; 1; Indels Score 9.4; DB 1; Pred. No. 1.3e+02; 0; Mismatches 1; 58.7%; Local Similarity 90.9 les 10; Conservative Query Match Matches

ö

ઠે g

ö

ADW86874 standard; DNA; 12 (first entry) 07-APR-2005 ADW86874; RESULT 186 ADW86874

BP.

DNA purification; protein engineering; diagnosis; ss. Protein labelling method sequence #76. WO2004113530-A1. Unidentified 29-DEC-2004.

18-JUN-2003; 2003JP-00173634. (MITU) MITSUBISHI CHEM CORP.

18-JUN-2004; 2004WO-JP008953.

Suzuki K; Kobayashi T, Shiratori M, Sasaki T; Nakano H, Hashimoto H, ů, Naka

WPI; 2005-075248/08.

Novel polynucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence of labeling compound,

Disclosure; Fig 19; 140pp; Japanese.

The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3 terminal of sequence encoding target protein of gene template, where labeling compound has label portion and acceptor portion having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, translating the gene template in the presence of the labeling compound

```
The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3' terminal of sequence encoding target protein of gene template, where labeling compound has label portion and acceptor portion having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, translating the gene template in the presence of the labeling compound containing acceptor portion and label portion, and obtaining protein synthesized in the translation system. The base sequence encoding the target protein either contains the termination coden or does not contain the termination coden. The labeling compound is added after the initiation of the translation. The labeled protein (LPI) is useful in a
                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
containing acceptor portion and label portion, and obtaining protein synthesized in the translation system. The base sequence encoding the target protein either contains the termination codon or does not contain the termination codon. The labeling compound is added after the initiation of the translation. The labeled protein (LPI) is useful in a performance-analysis of a protein, which involves contacting the test substance with (LPI), and analyzing the interaction between the protein and the test substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled protein. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel polynucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence
                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                  Score 9.4; DB 1; Length 12;
Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Suzuki K;
                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                           Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shiratori M, Kobayashi T,
                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein labelling method sequence #187.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Fig 20; 140pp; Japanese.
                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                                                                58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-JUN-2004; 2004WO-JP008953.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (MITU ) MITSUBISHI CHEM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADW86985 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                            1 CGCCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                   1 ceeeeeeceec 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Naka D, Nakano H, S
Hashimoto H, Sasaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2005-075248/08.
                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   labeling compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004113530-AL
                                                                                                                                                                                                      the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADW86985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel
  δ
                                                                                                                                                                                                                                                                                                                                                                                                 셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New nucleic acid molecule encoding BPM2B or a protein with a RING-finger domain and 6 NHL-motifs, useful for diagnosing and treating Lafora's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated nucleic acid molecule encoding a protein with a RING-finger domain and 6 NHL-motifs, where the protein is associated with Lafora's disease. The sequences, composition, kits, and methods are useful for diagnosing and treating Lafora's disease. The present sequence represents the D repeat present in the dog Lafora body disease associated protein EPM2B DNA.
performance-analysis of a protein, which involves contacting the test substance with (LPI), and analyzing the interaction between the protein and the test substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled protein. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                               ds; diagnosis; Lafora body disease; genetic disorder; EPM2B.
                                                                                                                                Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 9.4; DB 1; Length 12; Pred. No. 1.3e+02; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                     Dog Lafora body disease associated protein EPM2B D repeat.
                                                                                                                                                             1; Indels
                                                                                                   Sequence 12 BP; 0 A; 3 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12 BP; 0 A; 9 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 27; SEQ ID NO 5; 96pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HOSP-) HOSPITAL FOR SICK CHILDREN.
                                                                                                                                                                                                                                                                                               BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                  58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUL-2004; 2004WO-CA001449.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-AUG-2003; 2003US-0491968P.
                                                                                                                                                                                                                                                                              ADW87340/c
ID ADW87340 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 90.30,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV47290 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scherer SW, Minassian BA;
                                                                                                                                                               10; Conservative
                                                                                                                                                                                          11
                                                                                                                                                                                                                      11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CGGCGGCCGC 11
                                                                                                                                                                                                                       CGGGGGGCGCG
                                                                                                                                                                                          1 CGCCGGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11 ceeceecec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2005-142895/15.
                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                             Canis familiaris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO2005012526-A1.
                                                                         the invention.
                                                                                                                                                                                                                                                                                                                                                        21-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-FEB-2005
                                                                                                                                                                                                                                                                                                                            ADW87340;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 189
AAV47290
ID AAV472
                                                                                                                                                                                                                                                                 RESULT 188
                                                                                                                                                               Matches
 8888888
                                                                                                                                                                                                                    셤
                                                                                                                                                                                          ઠ
                                                                                                                                                                                                                                                                                                             ð
```

AAV47290;

Synthetic

```
BP.
                                                                                                                                                                                                                                                                                                                                                                                                     96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                      97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV47190 standard; DNA; 13
                 10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 90.9
....hes 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGGCGCCATGG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-322464/28.
                                                                                                                                                                                                  Key
modified_base
                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                    WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                      26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                    26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                     04-JUN-1998.
                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV47190
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine AI receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                               Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                     /*tag= a
/oute= "contains phosphorothioate internucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                              Antisense oligonucleotide 790, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          i, Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 13 BP; 1 A; 3 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 12; Page 8-24; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAV47272 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                     96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                     97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYEC-) UNIV EAST CAROLINA.
                                              (first entry)
                                                                                                                                                                                                                                                                                                    linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 90.9
les 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5 GGCGGCATCG 15
                                                                                                                                                                                                                                                   1. .13
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 édécédécáred 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              allergy, emphysema and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1998-322464/28.
                                                                                                                                                                                                                                   Key
modified_base
                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                     WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                    26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                     26-NOV-1996;
                                              10-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                  04-JUN-1998
```

Nyce JW;

Query Match

Best Loca Matches

8

AAV47272

RESULT 190 AAV47272

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine AI receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inflammation in humans or other animals e.g. asthma, pulmonary disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                   Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
Antisense oligonucleotide 772, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 9.4; DB 1; Length 13;
Pred. No. 1.4e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 13 BP; 2 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 12; Page 8-24; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV47190;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XXXX
```

```
AAX53667
         ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequences AAV46501-V4746 are anti-sense oligonuclectides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analyse and used to construct antisense oligonuclectides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonuclectides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonuclectides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung and an analyse and an analy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                     Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.

    .13
    /*tag= a
    note= "contains phosphorothioate internucleotide

                 Antisense oligonucleotide 690, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 13 BP; 3 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  allergy, emphysema and cystic fibrosis
                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAX53649 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                     97WO-US022017.
                                                                                                                                                                                                                                                                                                                                                                                                         96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                          linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GCCGGCCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 GGAGGCGGCA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-322464/28.
                                                                                                                                                                                  Key
modified_base
                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                     26-NOV-1997;
                                                                                                                                                                                                                                                                                             409823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                         26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                 34-JUN-1998
                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAX53649;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAX53649
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exaxexe
```

```
directed against at least 2 mRNAs selected from target genes, coding and con-coding regions of RNAs corresponding to target genes, coding and con-coding regions of RNAs corresponding to target genes, coding and con-coding regions of RNAs corresponding to target genes, coding and and coding regions, intron-exon borders, the 5'-end, the 3' codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3' codons, genomic flanking regions, and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX5512-74. These multiple target oligonucleotides from sequences AAX55180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic thinitis, acute asthma, allergies, asthma, impeded respiration, respiratory diseases (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancreatic cancer, colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                       impaired respiration; inflammation; lung disease;
pulmonary vasconstriction; inflammation; allergic rhinitis;
acute asthma; allergy; asthma; impeded respiration;
respiratory distress syndrome; pain; cystic fibrosis;
pulmonary hypertension; pulmonary vasoconstriction; emphysema;
chronic obstructive pulmonary disease; leukemis; lymphoma; carcinoma;
colon cancer; breast cancer; lung cancer; pancreatic cancer;
hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New antisense oligonucleotides used in treatment of, e.g. pulmonary
Antisense oligonucleotide; multiple target; antisense treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 13 BP; 2 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВЪ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-00093972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX53667 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 GGCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 GGCCGCATGG 12
                                                                                                                                                                                                                                                                                                                                              prostate cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX53667;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 193
```

05-JUL-1999 (first entry)

```
The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and
con-coding regions of RNAs corresponding to target genes, coding and
codons, genomic flanking regions, intron-excon borders, the 5'-end, the 3'
codons, genomic flanking regions, intron-excon borders, the 5'-end, the 3'
codonistions of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55120-74. These multiple target oligonucleotides
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55180-271) can be used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
cassociated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
caute asthma, allergies, asthma, impeded respiration, respiratory
distress syndrome, pain, cystic fibrosis, pulmonary hypertension,
cult asterma allergies asthma, impeded respiration, are cancers such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases, as
colon cancer, breast cancer, which may metastasize or have metastasized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                            respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                           Antisense oligonucleotide; multiple target; antisense treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
0
                      Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                               impaired respiration; inflammation; lung disease;
pulmonary vasoconstriction; inflammation; allergic rhinitis;
acute asthma; allergy; asthma; impeded respiration;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 13 BP; 1 A; 3 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAX53567 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-0059160P
98US-00093972
                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 GGGGGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGCGGCATGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-229400/19.
                                                                                                                                                                                                                                                        prostate cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                           17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-SEP-1997;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                        WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-1999
                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAX53567
à
```

AAX53567

```
The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and
con-coding regions of RNAs corresponding to target genes, gene initiation
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codonitions or mixtures. The antisense oligonucleotides may be derived
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
conditions. Typical diseases and conditions are those
diseases and conditions. Typical diseases and conditions are those
cassociated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, respiratory
caute asthma, allergies, asthma, impeded respiration, respiratory
distress syndrome, pain, cystic fibrosis, pulmonary hypertension,
clisease (CODD), and cancers such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases, as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                             pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                              antisense treatment;
                                                        Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 9.4; DB 1; Length 13;
Pred. No. 1.4e+02;
0; Mismatches 1; Indels
                                                                                            Antisense oligonucleotide; multiple target; antis
impaired respiration; inflammation; lung disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 13 BP; 3 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP.
                                                                                                                                                                                                                                                                                                                                                                                                                             98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97US-0059160P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA33092 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 90.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GGAGGGCGCCA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGCCA
                                                                                                                                                                                                                                                                        prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vasoconstriction
                                                                                                                                                                                                                                                                                                                                                WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                           17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-1999.
                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA33092
셤
```

```
The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets concleid acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating c.g. impaired airways, including lung disease and diseases whose secondary impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the construction and inflammation. AAA32313 to the lungs, including crelease of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent to invention, which correspond to SEQ ID No:1 to 2815, and then the present correspond to SEQ ID No:1 to 2815, and then the last 185 for invention, which correspond to SEQ ID No:1 to 2815, and then the last 185 for from the previously named sequences. SEQ ID No:1 to 1680 (AAA3232) to AAA3392) are specifically claimed ONS from the present invention. N B. Sequences given in the disclosure of the present invention. N B. Sequences given in the sequence of the present invention. Here is a prince of the present invention. Here is a prince of the present invention.
                                                                                                                                                                                                                                                                                                                                                                antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway, lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                Human, adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                     ow adenosine antisense oligonucleotide SEQ ID NO:781.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 13 BP; 2 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 18; Page 364; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYEC-) UNIV EAST CAROLINA.
28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200009525-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancers.
```

Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergy; disease; bronchoconstriction; inhibitor; antinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss. New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or Low adenosine antisense oligonucleotide SEQ ID NO:799. Claim 18; Page 366; 1343pp; English. AAA33110 standard; DNA; 13 BP. 99WO-US017712 98US-0095212P (UYEC-) UNIV EAST CAROLINA. (first entry) 2 GGGCGGCATGG 12 WPI; 2000-205971/18 WO200009525-A2. Ното варіеля 03-AUG-1999; 03-AUG-1998; 28-JUL-2000 24-FEB-2000. AAA33110; Nyce JW; cancers. RESULT 196 AAA33110 ID AAA3 a

The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or continuition. The ON can have antialial antiallergic, antialiary inflammation. The ON can have antialial associated with inflammation. The one treatment of diseases associated with inflammation, cuseful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasconstriction, allergies, asthma, cimpeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive cracinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONS reduces side effects. The A-containing ONS break down with the crack decorption and inflammation. AAA32313 to AAA35312 represent the concludence are also called SEQ ID NO:1 to 185, but the sequences given in the sequence listing from the present convention, which correspond to SEQ ID NO:1 to 185, but the sequences differ convention of the previously named sequences. SEQ ID NO:1 to 185, but the sequences of from the previously named sequences. SEQ ID NO:1 to 185, but the sequences of from the previously named sequences. SEQ ID NO:1 to 185, but the sequences of from the previously named sequences. SEQ ID NO:1 to 185, but the sequence of from the previously named sequences. SEQ ID NO:1 to 185, but the sequences of from the previously named sequences. SEQ ID NO:1 to 185, but the sequences of from the previously named sequences. SEQ ID NO:1 to 185, but the sequence of the previously named sequences are necessared. AAA33992) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence

ö

Gaps

ö

Score 9.4; DB 1; Length 13; Pred. No. 1.4e+02; 0; Mismatches 1; Indels

ch 58.7%; 1 Similarity 90.9%; 10; Conservative

Query Match Best Local Similarity

Matches

```
The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating c. grobaemic conditions, pulmonary vasconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the observations with activates adenosine receptors causing chronic squences given in the sequence listing from the present the nucleotide sequences given in the sequence listing from the present convention, which correspond to SEQ ID NO:1 to 1821, and then the last 185 centerion, and chan the last 185 centerion, and chan the last 185 centerion and inflammation. AAA32131 to AAA331231 to AAA331231
                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                          .;
0
       Length 13;
                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                               Low adenosine antisense oligonucleotide SEQ ID NO:699.
     Score 9.4; DB 1; Le
Pred. No. 1.4e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 18; Page 354; 1343pp; English.
                                                                                                                                                                                                                                                                                       AAA33010 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0095212P
     58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
Query Match 58.7
Best Local Similarity 90.9
Matches 10, Conservative
                                                                                                          5 GGGGGCCATCG 15
                                                                                                                                                          1 ĠĠĠĊĠĠĊĂŢĠĠ 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                             28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-FEB-2000
                                                                                                                                                                                                                                                                                                                                          AAA33010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce JW;
                                                                                                                                                                                                                                       RESULT 197
                                                                                                                                                                                                                                                                  AAA33010
                                                                                                                                                                                                                                                                                             ઠે
                                                                                                                                                       유
```

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits denosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine A2a receptor agonist (Ia), or an oligomucleotide composition of the containing less than 15th adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' compositions between coding and non-coding sequences), or to all segments of mRNA encoding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 receptors, and least no agonist activity or A2a antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and (Ib), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine (particularly where associated with ischaemia, toxin release and/or creating supraventricular tachycardia); (adult) respiratory distress syndrome
                                                                                                                                                       ö
         not match
Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine Aza receptor; adenosine Ab receptor; adenosine As receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                               Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:653.
                                                                                                                                                       ö
                                                                                                                 Score 9.4; DB 1; Length 13; Pred. No. 1.4e+02; 0; Mismatches 1; Indels
                                                                                 Sequence 13 BP; 3 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 17; Page 33; 252pp; English.
                                                                                                                                                                                                                                                                                                                         BP.
                                                                                                                 58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-US012775,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0088501P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                       AAA03369 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                               19-MAY-2000 (first entry)
                                                                                                                                                       10; Conservative
                                                                                                                                                                                            2 GGCGGGCGGCA 12
                                                                                                                                                                                                                              GGAGGGCGGCA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-116433/10.
                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         renal injury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                           AAA03369;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce JW,
                                                                                                                   Query Match
                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                        AAA03369
         2005×8
                                                                                                                                                                                            8
                                                                                                                                                                                                                            셤
```

```
(e.g. associated with sepsis); allergic rhinitis; chronic obstructive bullmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02719, AAA02721 and AAA02721 to AAA02712 to oligonucleotides for use in the composition of the present invention. AAA02718, AAA02718, AAA02722 and AAA03716 to AAA03718, copresent continued to the present invention. AAA02718, Copresent continued to the present of the present of the phosphorothioate oligonucleotides used in the exemplification of the
                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes a pharmaceutical composition, comprising at least one agent (1) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.
(1) is an adenosine A2a receptor agonist (1a), or an oligonucleotide (1b), containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (1.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 receptors, and has A1, A2b or A3 agonist activity or A2a antagonist activity (or at least no agonist activity at this receptor). (1) may be a mixture of (1a)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine As receptor; adenosine As receptor; adenosine As receptor; phosphorothicate; cardioqualmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; anti-chlorate; allergic shinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:753,
                                                                                                                                                                                                                                                                                .
0
                                                                                                                                                                                                                                  58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                               Sequence 13 BP; 3 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 17; Page 35; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAA03469 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0088501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                          10; Conservative
                                                                                                                                                                                                                                                                                                                  2 GGCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                       GGAGGCGCCA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-116433/10
                                                                                                                                                                                                                                                      Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hill JL;
                                                                                                                                                             present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9963938-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA03469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce JW,
                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ношо
  888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠે
```

```
and (1b), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine (particularly where associated with ischeemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02719, AAA02721 and AAA02722 to AAA03715 represent specifically claimed phosphorothioate antisense oligonucleotides for use in the composition of the present invention. Phosphorothioate oligonucleotides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure. (I) is an adenosine AZa receptor agonist (Ia), or an oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorochicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:735.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               composition for treating or preventing e.g. cardiopulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; adenosine Al receptor; antisense oligonucleotide; hypoxia;
                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                         Score 9.4; DB 1; Length 13;
Pred. No. 1.4e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                       Sequence 13 BP; 1 A; 3 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
                                                                                                                                                                                                                                                                                                                          58.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0088501P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAA03451 Standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                           Local Similarity 90.9
hes 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                5 GGCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                              decederared 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-116433/10.
                                                                                                                                                                                                                                                      present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA03451;
                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 200
AAA03451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel
                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo
   888888888888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠે
```

```
ö
                genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3') ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the denosine Al, A2a, A2b or A3 receptors, and has A1, A2b or A3 agonist the denosine A1, A2a, A2b or A3 receptors, and least no agonist activity or A2a antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive
                                                                                                                                                                                                                                                                                         pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02719, AAA02721 and AAA02723 to AAA03715 represent specifically claimed phosphorothicate antisense oligonucleotides for use in the composition of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
containing less than 15% adenosine (A), that is antisense to target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                             represent other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                         AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent othe:
phosphorothioate oligonucleotides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human adenosine Al receptor polynucleotide fragment #799.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 13 BP; 2 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF19232 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 90.5
nes 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 GGCCGCCATGG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF19232;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF19232
    $$$$$$$$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
```

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (C) ingunucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with cartivating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokines, endogenously produced specific and non-specific enzymes, chemokines, adhesion molecules and their receptors, cytokines and chemokine receptors, adenosine receptors, bradynin receptors, cytokines and chemokine receptors, bradynin receptors, contral nervous system (CNS) and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and creeptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy (les) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergic syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary disease (OPDD), cyllmonary transplantation rejection, pulmonary disease (OPDD), cyllmonary transplantation rejection, pulmonary infections bronchitis, and/or the management and antisense oligonucleotides used in the exemplification of the present invent and antisense oligonucleotides used in the exemplification of the paragers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pain; cystic fibrosis; allergic rhinitis; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 9.4; DB 1; Length 13;
Pred. No. 1.4e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor polynucleotide fragment #699.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 13 BP; 1 A; 3 C; 8 G; 1 T; 0 U; 0 Other;
                                              Claim 14; Page 118; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF19132 standard; DNA; 13 BP.
and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.7%;
90.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGGCGGCATGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 GGCGGCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF19132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF19132
  ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
```

```
셤
                                                                                                                                                                                                                                                                                                       The present libration describes tow according to the controlled to a colligonucleotides and compositions (1) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (2) can have respiratory, bronchodilator, antinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (1) can be used to down-regulate the expression and or activity of target polypeptides associated with clung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunosuppression and ransmitters, transcription factors, chemokines, endogenously produced specific and non-specific enaymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system (CNS) and peripheral nervous and non-nervous system creceptors, defensines, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or lung inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome conditions elected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome whitened renewablants in the period of the peri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                 content antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human adenosine Al receptor polynucleotide fragment #781.
                                                                                                                                                                                                                                                                                             The present invention describes low adenosine (A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 13 BP; 3 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                         Claim 14; Page 116; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP.
                 99US-0127958P.
                                                   (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF19214 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 90.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGGGGGGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 GGAGGCCGCCA 13
                                                                                                                                             WPI; 2000-679539/66.
                 06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF19214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                           Nyce JW;
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
```

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (II) can have respiratory, bronchodilator, antinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with cartivating peptide factors and malignancies, such as stimulating and cartivating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, immunoglobulins and antibodies, antibody receptors, cytokines and chemokine, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system peptide to receptors, binding proteins and malignancy associated proteins. The transmitters defensins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction) and/or bronchoconstriction, and/or lung inflammation, and/or bronchoconstriction, and/or lung inflammation, allergie asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CP), allergic rhinitis (AR), pulmonary conditions elected from pulmonary vasoconstriction, inflammation, allergies, and/or encer AAFIB434 to AAFIS1543 represent human polynucleotide in the exemplification of the manner and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, pulmonary transplantation rejection, chronic obstructive pulmonary disease, pulmonary infection, bronchitis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 13 BP; 2 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 14; Page 118; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABH27202 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99US-0127958P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                            WO200062736-A2
                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                              26-OCT-2000
                                                                                                                                     cancer; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABH27202
ID ABH2
```

```
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-OCT-2002.
            18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABZ94826;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                     Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABZ94826
  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                        This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABC99989, ABF00010-ABF99899, ABH00010-ABH99989 and ABI00010-ABH82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                   SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                        oligonucleotides, useful for diagnosis and cell typing, ied to detect single-nucleotide polymorphisms and cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
0
                                              Oligonucleotide SEQ ID NO 227179 for detecting SNP TSC0006410.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Oligonucleotide SEQ ID NO 227180 for detecting SNP TSC0006410
                                                                                                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 227179; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 9.4; DB 1; Length 13;
Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 13 BP; 1 A; 2 C; 6 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                           Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP.
                                                                                                                                                                                     06-APR-2001; 2001WO-IB000713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58.7%;
90.9%;
                                                                                                                                                                                                             07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABH27203 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                       22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10; Conservative
                                                                                                                                                                                                                                                           Olek A, Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GCGGCCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GCGGCCGGTAT 12
                                                                                                                                                                                                                                    (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                  WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                               methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                      WO200177384-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200177384-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                 Homo sapiens
                                                                                                                                                              18-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-FEB-2002
                                                                                                                                                                                                                                                                                                        Set of oldesigned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABH27203;
ABH27202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BXSXXXXXXXXXXXXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
```

```
This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABF82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at fire printed specification, but fire wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; antisense; lung dysfunction; nasal airway dysfunction; antinflammatory steroid; ubiquinone; antinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                  useful for diagnosis and cell typing, is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW, Li Y, Sandrasagra A, Katz E, Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         designed to detect single-nucleotide polymorphisms and cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 227180; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human adenosine Al receptor antisense fragment no.689.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 13 BP; 4 A; 6 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                            Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABZ94826 standard; DNA; 13 BP
06-APR-2001; 2001WO-IB000713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (EPIG-) EPIGENESIS PHARM INC.
                                                                              07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-OCT-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                      Set of oligonucleotides,
                                                                                                                                                                                                                                                Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GCGGGCGGCAT 13
                                                                                                                                                                 (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                   WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200285308-A2
```

```
has antiinflammatory, antiallergic, antiathmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antiense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                        composition, which has a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchollation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                           The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; antisense; lung dysfunction; nasal airway dysfunction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human adenosine Al receptor antisense fragment no.789.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Katz E, Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 13 BP; 3 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                        Disclosure; SEQ ID NO 10068; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ftp.wipo.int/pub/published_pct_sequences
    Shahabuddin S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Li Y, Sandrasagra A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABZ94926 standard; DNA; 13 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-2002; 2002WO-US013135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-OCT-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity 90.9
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             || |||||||||
|GAGGGCGGCA 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGCGGCA 12
                                           WPI; 2003-229219/22
  Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-OCT-2002
                                                                                                                                             ubiquinone.
  Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABZ94926;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABZ94926
ઠે
```

```
The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the continuitation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or casal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, communosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an entisfinammatory steroid in a subject, for reducing levels of continion or continion and inflammation, lung allergies, or treating bronchodilation, increasing levels of ubiquinone or culturg suffactant in a subject is tissue, or treating bronchodilation, continions in the printed continion but was obtained in electronic format directly from WIPO
                                                                        Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory; steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nyce JW, Li Y, Sandrasagra A, Katz E, Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human adenosine Al receptor antisense fragment no.771.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 13 BP; 1 A; 3 C; 8 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                           Disclosure; SEQ ID NO 10168; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     at ftp.wipo.int/pub/published_pct_sequences
    ŝ
  Shahabuddin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dest Local Similarity 90.50,
Best Local Similarity 90.50,
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABZ94908 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-OCT-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGGCGGCATGG 11
Tang L,
                                     WPI; 2003-229219/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-OCT-2002.
                                                                                                                                     ubiquinone.
Miller S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABZ94908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABZ94908
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the intiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, 5' or 2' end genomic flanking regions, 5' and 3' intron-exon junctions or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiaethmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a cuse in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or therapeutic respiratory effect of an antishind a respiratory is an enabled; for reducing or depleting levels of or enhancing the prophylactic or therapeutic respiratory effect of an antishind pronchodilation, increasing levels of adenosine receptor, producing bronchodilation, increasing levels of adenosine lung inflammation, lung allergies, or a respiratory disease or condition, lung surfactant in a subject's tissue, or treating bronchoconstriction, lung unflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO cat fip. wipo.int/pub/published_pct_sequences Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; anniallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or Gaps ö 58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; ive 0; Mismatches 1; Indels Human adenosine Al receptor oligonucleotide fragment 689. Sequence 13 BP; 2 A; 3 C; 7 G; 1 T; 0 U; 0 Other; Disclosure; SEQ ID NO 10150; 872pp; English Shahabuddin S; ABD18674 standard; DNA; 13 BP. 24-APR-2001; 2001US-0286036P. 23-APR-2002; 2002WO-US013143 (EPIG-) EPIGENESIS PHARM INC (first entry) 10; Conservative 5 GGGCGCCATCG 15 2 GGGCGGCATGG 12 WPI; 2003-229219/22 Tang L, Best Local Similarity WO200285309-A2 Homo sapiens 29-JUL-2004 31-OCT-2002 ubiquinone ABD18674; Miller S, Query Match RESULT 209 Matches ð

ö

the invention describes a novel composition, all strike active agent, comporising oligomucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and bronchoconstriction, respiratory tract inflammation, allergies and creducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, creducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, creducing adenosine sensitivity, levels of adenosine containers are derived from agene encoding or regulating congruence and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery construction of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered cor availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung corresponding to inflammation, allergies, asthma, impeded respiration, respiratory confistes syndrome, pain, cystic fibrosis, altergie kindings to lung to transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to the variant, heart, kinds, serves to prevent the breakdown of thymidines present in the target RNA serves to prevent the breakdown of the uniquence of the notice of the anti-sense or condition to the system event any unwarted effects that free adenosine environment and thereby, to recover the angent and the system of the anti-sense and the system of the anti-sense and the system of the original succession in the target RNA serves to prevent the breakdown of t Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antifinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; bronchitis; pulmonary transplantation rejection; ds. This invention describes a novel composition (a) a first active agent, S Gaps Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted tnucleic acids associated with lung airway or lung dysfunction, and ä ö Aguilar 58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; Live 0; Mismatches 1; Indels Human adenosine Al receptor oligonucleotide fragment 771. Pabalan J, Sequence 13 BP; 3 A; 2 C; 7 G; 1 T; 0 U; 0 Other; Claim 15; SEQ ID NO 10068; 763pp; English. Katz E, prevent any unwanted effects due to it Li Y, Sandrasagra A, K. Tang L, Shahabuddin S; ВЪ. ABD18756 standard; DNA; 13 (first entry) Local Similarity 90.9 nes 10; Conservative 2 GGCGGGCGCA 12 3 GGAGGGCGGCA 13 bronchodilating agent WPI; 2003-093058/08. 29-JUL-2004 Nyce JW, L Miller S, ABD18756; Query Match RESULT 210 Matches ABD18756 &&&&&&&&& g

Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiastematic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic hinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.

Human adenosine Al receptor oligonucleotide fragment 789.

(first entry)

29-JUL-2004

```
ABD18774 standard; DNA; 13 BP.
                                                                                                                                                         Conservative
                                                                                                                                                              GGCCGCCATCG 15
                                                                                                                                                                   GGCCGCATGG 12
                                                                                                                                                   Query Match
Best Local Similarity
             31-OCT-2002
                                                                                                                                                         10;
                                Nyce JW, 1
Miller S,
                                                                                                                                                                                     ABD18774;
                                                                                                                                                      Best Loca
Matches
                                                                                                                                                                          RESULT 211
                                                                                                                                                                             ABD1877
δ
                                                                                                                                                                  g
                                                                                                                                                                                SXXX
```

```
analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing of treating a respiratory, lung or malignant disease. The administered composition comprises objoing and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary transplantation rejection, pulmonary infections, bronchitis, pulmonary transplantation rejection, pulmonary infections, bronchitis, or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ဌ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 13 BP; 2 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 15; SEQ ID NO 10150; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sandrasagra A,
                                                                                                                                                                                                                                                                                   23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                                                                                   24-APR-2001; 2001US-0286036P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŗ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Li Y,
Tang
                                                                                               WO200285309-A2
Homo sapiens.
```

ç

Katz E, Pabalan J, Aguilar D;

Sandrasagra A, Ka L, Shahabuddin S;

Li Y, San Tang L,

Miller S,

Nyce JW,

WPI; 2003-093058/08.

(EPIG-) EPIGENESIS PHARM INC. 24-APR-2001; 2001US-0286036P

23-APR-2002; 2002WO-US013143.

WO200285309-A2

31-OCT-2002.

Homo sapiens

oligonucleotide containing less percentage of adenosine, targeted to nucleic acids associated with lung airway or lung dysfunction, and

bronchodilating agent.

Pharmaceutical composition for treating asthma, has antisense

```
This interior describes a novel comportation of the factor of the factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oligonucleotides into products that free adenosine into the system .. lung, brain, heart, kidney, etc, tissue environment and thereby, to vent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          invention describes a novel composition (a) a first active agent,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 15; SEQ ID NO 10168; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    e.g., lung, brain,
prevent any unwant
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; Live 0; Mismatches 1; Indels
```

ö

Gaps

ö

58.7%; Score 9.4; DB 1; Length 13; 90.9%; Pred. No. 1.4e+02; tive 0; Mismatches 1; Indels

10; Conservative

Best Local Similarity

Matches

Query Match

Sequence 13 BP; 1 A; 3 C; 8 G; 1 T; 0 U; 0 Other;

g

Human adenosine receptor related polynucleotide SEQ ID NO:2417.

(first entry)

28-JUL-2000

AAA34728;

AAA34728 standard; DNA; 10 BP.

AAA34728

```
Novel polynucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a polymucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3' terminal of sequence encoding target protein of gene template, where labeling compound has label portion and acceptor portion having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, translating gene encoding the target protein synthesized in the translation system. The base sequence encoding the target protein either contains synthesized in the translation system. The base sequence encoding the target protein either contains the termination codon or does not contain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the termination codon. The labeling compound is added after the initiation of the translation. The labeled protein (LP1) is useful in a performance-analysis of a protein, which involves contacting the test substance with (LP1), and analyzing the interaction between the protein and the test substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled protein. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 9.4; DB 1; Length 13;
Pred. No. 1.4e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suzuki K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ONA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seguence 13 BP; 0 A; 4 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kobayashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein labelling method sequence #183.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure, Fig 20, 140pp, Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shiratori M,
                                                                                                                                                                                                                                                              BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JUN-2004; 2004WO-JP008953.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (MITU ) MITSUBISHI CHEM CORP
                                                                                                                                                                                                                                                          ADW86981 standard; DNA; 13
                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 90.9
Matches 10; Conservative
GGCGGCATCG 15
                                                                  GGGGGCATGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hashimoto H, Sasaki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2005-075248/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nakano H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     labeling compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2004113530-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                              07-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-DEC-2004
                                                                                                                                                                                                                                                                                                                                    ADW86981;
                                                                                                                                                                                   RESULT 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Naka
```

```
The present invention describes a new composition comprising an antisense cligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic acids the compositions are useful for the treatment of diseases associated with inflammation, comparing the compositions are useful for the treatment of diseases and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating of a subject. They can be used for treating c.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive cultiprosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including to breast and prostate cancer. The reduction of the adenosine content of the construction and inflammation. AAA32312 to AAA32312 respected the processor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nuclectide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to AAA33992) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                      antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                      Human, adenosine receptor, low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation, allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 9.2; DB 1; Length 10; Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 0 A; 2 C; 7 G; 0 T; 0 U; 1 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 571; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                           WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       listing
```

ö

Gaps .. 0

> 1 CGGCGGCGGC 11

8

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory' bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cycostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with cappression and or activity of target polypeptides associated with cappression and or activity of target polypeptides associated with cappression and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, immunoglobulins and antibodies, antibody receptors, cytokine and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradyinin receptors, central cerceptors, adenosine receptors, bradyinin receptors, central cerceptors, defensines, growth factors, vasocative peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders and creceptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders and/or bronchoconstriction) and/or lunging inflammation, allergy (ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation,
      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                    human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; path, cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
        Gaps
                                                                                                                                                                                                                                                                                                                                                                       adenosine antisense oligonucleotide; phosphorothioate; allergy;
        ö
                                                                                                                                                                                                                                                                                                                            Human adenosine Al receptor polynucleotide fragment #2417.
      Indels
      ö
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 14; Page 106; 1592pp; English.
    ij
                                                                                                                                                                                          AAF20850 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and respiratory obstructions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EAST CAROLINA.
                                                                                                                                                                                                                                                                               (first entry)
  9; Conservative
                                            11
                                                                   2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200062736-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV
(NYCE/) NYCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-APR-1999;
                                                                                                                                                                                                                                                                               14-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancer; ss.
                                                                                                                                                                                                                                     AAF20850;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nyce JW;
Matches
                                                                                                                                                                                                                ઠે
                                                                                   a
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory; antiallergic; antianflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding regions, 5' and genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiaschmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels
              (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAPIS434 to AAPIS153 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aguilar D;
                                                                                                                                                                                                                                     ö
                                                                                                                                                                                               Length 10;
                                                                                                                                                                                                                                 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human adenosine Al receptor antisense fragment no.1662.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pabalan J,
                                                                                                                                                  Sequence 10 BP; 0 A; 2 C; 7 G; 0 T; 0 U; 1 Other;
                                                                                                                                                                                             Score 9.2; DB 1;
Pred. No. 1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID NO 11786; 872pp; English.
                                                                                                                                                                                                                                 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Katz B,
allergies, asthma, impeded respiration,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Li Y, Sandrassass....
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                        ABZ96544 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2002, 2002WO-US013135.
                                                                                                                                                                                             57.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                             Local Similarity 90.0
                                                                                                                                                                                                                                                                                                           1 GGBGGCCGC 10
                                                                                                                                                                                                                                                                     2 GGCGGGCGGC 11
                                                                                                                  the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200285308-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-0CT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW, I
Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ubiquinone
                                                                                                                                                                                                                                                                                                                                                                                                                                                ABZ96544;
                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                   RESULT 215
                                                                                                                                                                                                                                 Matches
888888888888
                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                         g
```

```
ö
of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine AI receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Secondary structure; mRNA; phosphorothicate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= a
/note= "contains phosphorothioate internucleotide
                                                                                                                                                                                                        .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Antisense oligonucleotide 775, targeting adenosine Al receptor.
                                                                                                                                                                      57.5%; Score 9.2; DB 1; Length 10; 90.0%; Pred. No. 1.1e+02;
                                                                                                                                                                                                    0; Indels
                                                                                                                                     Sequence 10 BP; 0 A; 2 C; 7 G; 0 T; 0 U; 1 Other;
                                                                                                  ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                        1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                           BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97WO-US022017
                                                                                                                                                                                                                                                                                                                                                          AAV47275 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linkages"
                                                                                                                                                                                   Local Similarity 90.0
les 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .10
/*tag=
                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                       11
                                                                                                                                                                                                                                                             2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYEC-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                              10-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                           AAV47275;
                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nyce JW;
                                                                                                                                                                                                                                                                                                                        RESULT 216
                                                                                                                                                                                          Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                           à
                                                                                                                                                                                                                                                                         유
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequences AAV45501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or
                                                inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult
                 treat or
                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Secondary structure; mRNA; phosphorothioate backbone; G-protein;
                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                Antisense oligonucleotide 793, targeting adenosine Al receptor.
protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to prevent conditions associated with bronchoconstriction and/or
                                                                                                                                       Length 10;
                                                                                                   Sequence 10 BP; 2 A; 2 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                  56.2%; Score 9; DB 1; Les 100.0%; Pred. No. 1.2e+02; iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                             BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97WO-US022017.
                                                                                                                                                                                                                                                                                                                           AAV47293 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                             10-NOV-1998 (first entry)
                                                                                                                   Query Match
Best Local Similarity luv...
9; Conservative
                                                                                                                                                                                                       13
                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1998-322464/28.
                                                                                                                                                                                                       GGGCGCCAT
                                                                                                                                                                                                                                         GGCGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-JUN-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                                                                                                                             AAV47293;
                                                                                                                                                                                                       Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce JW
                                                                                                                                                                                                                                                                                           RESULT 217
                                                                                                                                                                                                                                                                                                              AAV47293
88888888
                                                                                                                                                                                                         ਨੇ
                                                                                                                                                                                                                                       임
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271)
directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, gene initiation
codons, genomic flanking regions, intron-excon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all
codons, sepments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oilgonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
(Specifically AXX53180-271) can be used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
cautte asthma, allergies, asthma, impeded respiration, respiratory
distress syndrome, pain, cystic fibrosis, pulmonary hypertension,
pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary
                                                                                                                                                                ö
prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impedd respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; cohronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis; prostate cancer; ss.
                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                            0; Indels
                                                                                                                 56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; Indels
                                                                             Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure, Page 39, 120pp; English.
                                                                                                                                                                                                                                                                                                                                   AAX53652 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                    Local Similarity 100.
                                                                                                                                                                                            5 GGGGGGCAT 13
                                                                                                                                                                                                                                 1 GGCCGCCAT 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                         AAX53652;
                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nyce JW;
                                                                                                                                          Best Loc
Matches
                                                                                                                                                                                                                                                                                                                  AAX53652
  ន្តដូប្បដូ
                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                 셤
```

```
ö
disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The specification describes antisense oligonuclectides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, regions regions of RNAs corresponding to target genes, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX5527-4. These multiple target oligonucleotides (specifically AAX5180-271) can be used for the antisense treatment of diseases and conditions are thosse associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis, acute asthma, allergies, asthma, impeded respiration, respiratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; allergic rhinitis; acute asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                        Length 10;
                                                                                                                 Sequence 10 BP; 2 A; 2 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                    56.2%; Score 9; DB 1; Ler 100.0%; Pred. No. 1.2e+02; iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                 AAX53670 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUL-1999 (first entry)
                                                                                                                                                                                          9; Conservative
                                                                                                                                                                                                                                                      5 GGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-229400/19.
                                                                                                                                                                          Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                        AAX53670;
                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW;
                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                             AAX53670
 88888888
                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                  à
```

```
distress syndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphyseme, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancreatic cancer, bepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
8
```

Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;

```
Gaps
                     °,
                   0; Indels
DB 1; Length 10;
                     0; Mismatches
56.2%; Score 9; 100.0%; Pred. No.
         Best Local Similarity 100.
Matches 9; Conservative
                                        5 GGGGGGGAT 13
                                                             6
  Query Match
                                           ઠે
                                                               g
```

ö

220

```
Low adenosine antisense oligonucleotide SEQ ID NO:802.
 AAA33113 standard; DNA; 10 BP.
           (first entry)
           28-JUL-2000
      AAA33113;
AAA33113
```

Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;

cancer; leukaemia; lymphoma; carcinoma; metastasis; ss. Homo sapiens.

WO200009525-A2. 24-FEB-2000

98US-0095212P. 99WO-US017712 03-AUG-1999; 03-AUG-1998;

EAST CAROLINA (UYEC-) UNIV

Nyce JW;

WPI; 2000-205971/18

New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or

Claim 18; Page 366; 1343pp; English.

The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating eg. ischemaic conditions, pulmonary vasconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas,

```
carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the Nos reduces side effects. The A-containing ONS break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the mucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1690 (AAA32323 to AAA3392) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention. N.B. with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              listing
```

Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;

```
ö
                         Gaps
                         .,
0
56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; Indels
                          9; Conservative
                                                GGGCGCCAT 13
  Query Match
Best Local Similarity
                                                'n
                         Matches
                                                  ð
                                                                       셤
```

AAA33095 standard; DNA; 10 BP.

AAA33095;

28-JUL-2000 (first entry)

Low adenosine antisense oligonucleotide SEQ ID NO:784.

antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.

Homo sapiens

WO200009525-A2

24-FEB-2000.

99WO-US017712 03-AUG-1999; 98US-0095212P 03-AUG-1998;

(UYEC-) UNIV EAST CAROLINA.

Nyce JW;

WPI; 2000-205971/18.

New antieense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or cancers

Claim 18; Page 364; 1343pp; English.

The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antishiflammatory, antiallergic, antisthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation,

```
impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (CODD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including the breast and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the relaces of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA12313 to AAA3512 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA2323 to AAA3392) are specifically claimed ONS from the present invention. N.B. Sequences given in the disclosure of the present invention. On matching the previously mander actions. The previous matching sequences given in the sequence invention do not matching the previous practices.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine As receptor; adenosine As receptor; adenosine As receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; envisable supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:756.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 56.2%; Score 9; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 1.2e+02; Matches 9; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 2 A; 2 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0088501P.
98US-00093972.
98US-0088657P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA03472 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGCAT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-JUN-1998;
09-JUN-1998;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9963938-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA03472;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAA03472
      a
```

Gaps

ö

The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits

CC adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

C(1), containing less than 15‡ adenosine (M), that is antisense to target genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3'

CC ends or segments between coding and non-coding sequences), or to all

CC has Al, A2b or A3 agonist activity or A2a antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia)

CC has Al, A2b or A3 agonist activity or A2a antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia)

CC and (lb), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine

CC (particularly where associated with isothemia, toxin release and/or ceptor-mediated active sepsies); allergic rhintis; chronic obstructive (e.g. amsociated with sepsies); allergic rhintis; chronic obstructive (e.g. associated with sepsies); allergic rhintis; chronic obstructive (c.g. with actue inflammation. AAA02717, AAA02719, AAA02721 and AAA02722 and AAA03715 represent specifically claimed phosphorothioate antisense coligonucleotides for use in the composition of the present invention.

CC AAA03715 represent specifically claimed phosphorothioate antisense corposition in the exemplification of the reason recognition of the present invention. ö Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine As receptor; adenosine As receptor; adenosine As receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; entrallar tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss. Gaps Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:738. ö 0; Indels 56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; Indel8 Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other; AAA03454 standard; DNA; 10 BP. 99WO-US012775. 98US-0088501P 98US-00093972. (EPIG-) EPIGENESIS PHARM INC. 19-MAY-2000 (first entry) Query Match
Best Local Similarity 100.
Matches 9, Conservative 5 GGGCGCCAT 13 1 GGCCGCCAT 9 present invention Nyce JW, Hill JL; Homo sapiens. WO9963938-A2 08-JUN-1999; 09-JUN-1998; 08-JUN-1998; 16-DEC-1999. Synthetic. AAA03454; RESULT 223 AAA03454 D X Y ઠે 셤

WPI; 2000-116433/10

Novel composition for treating or preventing e.g. cardiopulmonary and

WPI; 2000-116433/10.

Nyce JW, Hill JL;

Claim 17; Page 35; 252pp; English

renal injury.

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits

Cd adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine A2a receptor agonist (Ia), or an oligonucleotide

(Ib), containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (ie. 5' or 3'

c ends or segments between coding and non-coding sequences), or to all

segments of mRNA encoding the adenosine (A), A2a, A2b or A3 receptors, and

c segments of mRNA encoding the adenosine (I) may be a mixture of (Ia)

compositions are used to prevent, alleviate and/or treat adenosine

compositions are used to prevent, alleviate and/or treat adenosine

c ceceptor-mediated cardiac, lung and/or renal damage or failure

c particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating

c pulmonary disease; cardiopulmonary hypoxia associated with administration

c surpraverse-test agente, particularly where such conditions are associated with acute inflammation. AAA02119, AAA02721 and AAA02731 to AAA03715 represent invention.

c AAA03715 represent specifically claimed phosphorothioate antisense

condigonucleotides for use in the composition of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Low adenosine antisense oligonucleotide, phosphorothioate, allergy, human, airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory, bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypercension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other phosphorothioate oligonucleotides used in the exemplification of the
                  Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human adenosine Al receptor polynucleotide fragment #802.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 2 A; 2 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                       Claim 17; Page 35; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAF19235 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGGCGGCAT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 GGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                          renal injury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF19235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

24-MAR-2000; 2000WO-US008020

26-OCT-2000

99US-0127958P

06-APR-1999;

The present invention describes low adenosine (A) content antisense oligonuclectides and compositions (I) comprising them. In the antisense oligonuclectides and compositions (I) comprising them. In the antisense (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonuclectides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and malignancies, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central contractions system (TMS) and peripheral nervous and non-nervous systems. Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions. receptors, CNS and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; humanistich dependent depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; allergac rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; condition selected from pulmonary vasoconstriction, inflammation, allegies, asthma, impeded respiration, respiratory distress syndrome (RDS) pain, cystic fibrosis (CF), allegic thinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplanterion rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21843 represent human polymucleotide fragments and antisense oligonucleotides used in the exemplification of Gaps ö Human adenosine Al receptor polynucleotide fragment #784. 56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02; Itive 0; Mismatches 0; Indels Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other; Claim 14; Page 118; 1592pp; English. BP. (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W. AAF19217 standard; DNA; 10 (first entry) 9; Conservative the present invention GGGCGGCAT 13 σ WPI; 2000-679539/66. Local Similarity 1 GGGCGGCAT 14-MAR-2001 AAF19217; Query Match Nyce JW; RESULT 225 Matches **AAF**19217 Š 셤 ö

Human, mucin 1, MUC1; transmembrane protein; SNP; cancer; cytostatic; single nucleotide polymorphism; haplotyping; genotyping; drug; antiinflammatory; PCR; primer; 88.

Human MUC1 PCR primer SEQ ID NO 42.

22-JUL-2002 (first entry)

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. CC The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with undyrespiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, inding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adhosion molecules and their receptors, cytokine and chemokine receptors, adhosion molecules and non-nervous system (CNS) and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, bradykinin receptors, central creeptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (sepecially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergice, antisament conditions elected from pulmonary vasocoiated with a disease or condition selected from pulmonary vasocoiated with a disease or condition selected from pulmonary vasocoinstriction, inflammation, allergic synding condition employeement condition elected from pulmonary vasocoiated with a disease (OPD), when the selection which are associated with a disease (OPD), when the selection is suppressed to the pronched or suppression of particulation, respectively of surfaction mulmonary vasociated processes syndrome or surfactors and conditions elected from pulmonary disease or conditions and particulation elected from pulmonary infertions which are respect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynuclectide fragments and antisense oligonuclectides used in the exemplification of
chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10 BP; 2 A; 2 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 14; Page 118; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and respiratory obstructions.
                                                                                                                                                                                                                              24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                    99US-0127958P
                                                                                                                                                                                                                                                                                                                                    (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                           40200062736-A2
                                                                                                                                                                                                                                                                                    36-APR-1999;
                                                                             Homo sapiens.
                                                                                                                                                                              26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                             cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
```

New genetic variants of mucin 1, Transmembrane gene, useful in studying expression and function of protein encoded by the gene and for screening drugs to treat diseases e.g. cancer.

(GENA-) GENAISSANCE PHARM INC.

WPI; 2002-405042/43

Chew A, Koshy B;

25-SEP-2001; 2001WO-US030151. 28-SEP-2000; 2000US-0236113P.

WO200226765-A2 Homo sapiens.

04-APR-2002.

The invention relates to a polynucleotide (ABL60158, ABL60159) encoding

Claim 16; Page 14; 75pp; English.

```
mucin 1/MUC1 (ABB77476), Transmembrane isogene. The invention describes novel genetic variants of the MUC1 gene. The invention is useful for haplotyping pencyping the MUC1 gene. The invention is useful for chaplotyping pencyping the MUC1 gene in an individual and identifying an association between a trait and at least one of the haplotypes or haplotype pairs of MUC1 and expressing MUC1 protein for use in screening for and idunction of MUC1 and expressing MUC1 protein for use in screening for candidate drugs to treat diseases related to MUC1 activity and in studying the effect of the variation on the biological activity of MUC1 as well as on the binding affinity of candidate drugs targeting MUC1 for the treatment of e.g. cancer. MUC1 as further used by the pharmaceutical research scientist to validate MUC1 as a candidate target for and in design of clinical trials of candidate drugs for, treating a specific condition frugs or dasease predicted to be associated with MUC1 activity. MUC1 antibodies are useful in a variety of diagnostic and prognostic formats and therapeutic methods. The present sequence is that of a PCR primer for detecting MUC1 polymorphisms, useful to the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; antisense; lung dysfunction; nasal airway dysfunction; antialiamatory; steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human adenosine Al receptor antisense fragment no.792.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10 BP; 0 A; 8 C; 2 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВР.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABZ94929 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-OCT-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 GGCGGGCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABZ94929;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 227
ABZ94929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
ઠે
```

ö

0; Gaps

Conservative

GGCGGCAT 13

'n

8

10

GGGCGCCAT

ABL60198 standard; DNA; 10 BP.

RESULT 226

ABL60198,

ABL60198

```
The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation coodon, coding region, 5 or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytoetatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine or ecceptor, producing perceptor, increasing levels of edenosine or ecceptor, producing perceptor, increasing levels of edenosine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                               Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity;
adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                              Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; antisense; lung dysfunction; nasal airway dysfunction;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 10; 1.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor antisense fragment no.774.
                                                                                                                                                                                                                                                                                                           Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure, SEQ ID NO 10171, 872pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56.2%; Score 9; DB 1
100.0%; Pred. No. 1.2
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                              Katz E,
                                                                                                                                                                                                                                                                                                           Nyce JW, Li Y, Sandrasagra A, Ka
Miller S, Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP.
                                                                                                                                                                                     23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                            24-APR-2001; 2001US-0286137P
                                                                                                                                                                                                                                                                     (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.v.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABZ94911 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 GGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGCCGCCAT 9
                                                                                                                                                                                                                                                                                                                                                                        WPI; 2003-229219/22.
                                                                                                     WO200285308-A2
                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-0CT-2003
                                                                                                                                            31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ubiquinone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABZ94911;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABZ94911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
```

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation coodon, coding regalon, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing levels of adenosine of receptor, producing procholation, increasing levels of definition or receptor, producing procholation, increasing levels of definitions. Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; Gaps Aguilar D; ö 0; Indels 56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02; tive 0; Mismatches 0; Indels Pabalan J, Sequence 10 BP; 2 A; 2 C; 5 G; 1 T; 0 U; 0 Other; Human adenosine Al receptor DNA fragment #6. Disclosure; SEQ ID NO 10153; 872pp; English. at ftp.wipo.int/pub/published_pct_sequences Katz E, Li Y, Sandrasagra A, Ka Tang L, Shahabuddin S; BP. 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P. (EPIG-) EPIGENESIS PHARM INC. ABD17983 standard; DNA; 10 29-JUL-2004 (first entry) 10 13 WPI; 2003-229219/22. GGGGGGCAT GGCCGCCAT WO200285308-A2 Homo sapiens. 31-OCT-2002. Nyce JW, L Miller S, ubiquinone ABD17983; വ RESULT 229 ઠે 셤

ô

```
This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating by the comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating control of bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, curdicated defined as a tendencial or requiating or requiating or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a certification are areanergic agonist. The composition of successive and cytostatic activity, is a beta-adrenergic agonist. The composition disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies, asthma; impeded respiration, respiratory confitted such as pulmonary vasoconstriction, with a disease or condition such as pulmonary vasoconstriction, with a disease or condition such as pulmonary vasoconstriction, with a disease or condition such as pulmonary vasoconstriction.

The reduced demonsine content of the anti-sense oligon corresponding to transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligonucleotides into products that free adenosine into the system of thymidines present in the target RNA serves to prevent the breakdown of thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products th
beta-adrenergic agonist, respiratory disease, pulmonary vasoconstriction, respiratory distress syndrome; allergic rhinitis, pulmonary hypertension, emphysema; chronic obstructive pulmonary disease; cancer; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                        Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                        Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 15; SEQ ID NO 11786; 763pp; English
                                                                         pulmonary transplantation rejection; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                   Sandrasagra A, Ka
, Shahabuddin S;
                                                                                                                                                                                                                                                                  23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                  24-APR-2001; 2001US-0286036P.
                                                                                                                                                                                                                                                                                                                                                                     (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                   Li Y,
                                                                                                                                                                       WO200285309-A2
                                                                                                                         Homo sapiens
                                                                                                                                                                                                                     31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                            s,
                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                               Miller
```

Sequence 10 BP; 0 A; 2 C; 7 G; 0 T; 0 U; 1 Other;

ö 1; Indels DB 1; Length 10; 1.2e+02; Score 9; DB 1; Pred. No. 1.2e+ 0; Mismatches 56.2%; 9; Conservative Query Match Best Local Similarity Matches 9; Conserv

ö

Gaps

셤 ઢ

RESULT 230 ABD18759

ABD18759 standard; DNA; 10 BP.

ABD18759;

(first entry) 29-JUL-2004 Human adenosine Al receptor oligonucleotide fragment 774.

Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cycostatic; cystic fibrosis; beta-adrenergic agonist; respiratory distress syndrome; allergic hinitis; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; bronchitis; pulmonary transplantation rejection; ds. %XCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCX

Homo sapiens.

WO200285309-A2.

31-OCT-2002

23-APR-2002; 2002WO-US013143.

(EPIG-) EPIGENESIS PHARM INC

24-APR-2001; 2001US-0286036P.

Aguilar D; Pabalan J, Katz E, s; Li Y, Sandrasagra A, Tang L, Shahabuddin Miller S, Nyce JW,

S Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and WPI; 2003-093058/08.

Claim 15; SEQ ID NO 10153; 763pp; English.

bronchodilating agent.

The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligomucleotides, (c) device, in separate containers, (b) the oligomucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is composition comprises of malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to composition compute the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies and/or surfactant hypoproduction are associated distress syndrome, pain, cystic fibrosis, allergic thinitis, pulmonary impeded respiration, applicant, and the pulmonary disease, pulmonary disease, pulmonary disease, pulmonary disease, pulmonary contractions or conditions and contractive pulmonary disease, pulmonary disease, pulmonary contractions or conditions and contractive pulmonary disease. This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. tissue environment and thereby, to transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, prevent any unwanted effects due to it

Sequence 10 BP; 2 A; 2 C; 5 G; 1 T; 0 U; 0 Other;

```
comparising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine Sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (C) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or reduce the amount of target polypeptide present in the lungs. The contains allowed the contains and contains and contains and contains and contains and contains the lungs. The reduce the amount of target polypeptide present in the lungs. The composition and/or bronchoconstriction and/or lung in the langer.
                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                         Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 inflammation, allergies and/or surfactant hypoproduction are associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       invention describes a novel composition (a) a first active agent,
                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pabalan J, Aguilar D;
                                                ö
                                                                                                                                                                                                                                                                                                                                                                                  Human adenosine Al receptor oligonucleotide fragment 792.
                                           0; Indels
56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 15; SEQ ID NO 10171; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sandrasagra A, Ka
J. Shahabuddin S;
                                                                                                                                                                                                                                              ABD18777 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2002; 2002WO-US013143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-APR-2001; 2001US-0286036P
                                                                                                                                                                                                                                                                                                                                      29-JUL-2004 (first entry)
                                              9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bronchodilating agent.
                                                                                                                                   2 GGGCGGCAT 10
                                                                                          5 GGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Li Y, Sar
Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-093058/08.
  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200285309-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ното варіепв.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW,
Miller S,
                                                                                                                                                                                                                                                                                            ABD18777;
                                                                                                                                                                                                       RESULT 231
                                              Matches
                                                                                                                                   g
                                                                                                                                                                                                                                                                     ò
```

```
ö
with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergie; pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary hypertension, rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine Al receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Secondary structure; mRNA; phosphorothicate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Antisense oligonucleotide 774, targeting adenosine Al receptor
                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                           56.2%; Score 9; DB 1; Length 10; 100.0%; Pred. No. 1.2e+02;
                                                                                                                                                                                           Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                    100.0%; Pred. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                       AAV47274 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                             9; Conservative
                                                                                                                                                                                                                                                                                                5 GGCGGCAT 13
                                                                                                                                                                                                                                                                                                                              σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-322464/28.
                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                  1 GGGCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-JUN-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAV47274;
                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                    RESULT 232
                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                     AAV4727
 ਨੇ
                                                                                                                                                                                                                                                                                                                                셤
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between ciding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX55272-74. These multiple target oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of diseases and conditions are those
                            where they
antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                     prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypoconstriction; emphysema; chronic obstructive pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatcocallular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease;
                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                  DB 1; Length 11; . 1.4e+02;
                                                                                                                                                                         Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                  Score 9; I
Pred. No.
                                                                                                                                       allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                    BP.
                                                                                                                                                                                                                56.2%; S
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-0059160P
                                                                                                                                                                                                                                                                                                                                                                                                                                AAX53651 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                        9; Conservative
                                                                                                                                                                                                                                                                                             5 GGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                   GGCGCCAT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-229400/19.
                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAX53651;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                                                                                      Matches
  88888888888888
                                                                                                                                                                                                                                                                                             ઠ
                                                                                                                                                                                                                                                                                                                                 용
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma,
              diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis, acute asthma, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary of disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastasses, as well as all types of cancers which may metastasize or have metastasses, to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic diseases; bronchoconstriction; inhibitor; antiinflammatory; antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cyteic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                         Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Low adenosine antisense oligonucleotide SEQ ID NO:783.
                                                                                                                                                                                                                Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                     DB 1; Len
                                                                                                                                                                                                                                                                 100.0%; Pred. nc. o; Mismatches
                                                                                                                                                                                                                                                       Score 9; I
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 18; Page 364; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA33094 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0095212P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                            9; Conservative
                                                                                                                                                                                                                                                                                                                                   5 GGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                       GGCGCCAT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200009525-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-FEB-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAA33094;
                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cancers.
                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 234
                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA33094
88888888888888888
                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
```

```
ö
          Fibroais, pulmonary hypertension, emphysems, chronic obstructive fibroais, pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may wetastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA33313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:1 to 185, but the sequences differ handlay3923 are specifically claimed ONS from the present invention. N.B. Sequences given in the disclosure of the present invention. N.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergi; anti-inflammatory; anti-hypoxic; cupraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:737.
respiration, respiratory distress syndrome, pain, cystic
                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                      Length 11;
                                                                                                                                                                                                                                                                                                   Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                      Score 9; DB 1; Le:
Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 17; Page 35; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-00088501P.
98US-00093972.
98US-0088657P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAA03453 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                  n 56.2%; |
Similarity 100.0%;
9; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGGCGCCAT 10
                                                                                                                                                                                                                                                                                                                                                                                                           5 GGCCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-116433/10
                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W09963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAA03453;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 235
                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ношо
8566666666666666668888
                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
```

```
(I) is an adenosine A2a receptor agonist (Ia), or an oligonucleotide (Ib), containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (i.e. % or 3, ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 agonist activity or A2a antegonist activity (or at least no agonist activity or A2a antegonist activity (or at least no agonist activity or A2a antegonist activity (or at least no agonist activity or LNA and or more surfactants The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure receptor-mediated cardiac, lung and/or renal damage or failure receptor-mediated with ischaemia, toxin release and/or enginteration of druge or lingaging agents, e.g. adenosine for treating supravantricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02719, AAA02721 and AAA02722 to AAA03715 represent specifically claimed phosphorothicate antisense oligonucleotides for use in the composition of the present invention. AAA02718, AAA02722 and AAA03730 represent of the present of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Low adenosine (A) content antisense oligonucleotides which do not trigger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; burfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pain; cystic fibrosis; allergic rhinitis; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human adenosine A1 receptor polynucleotide fragment #783.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56.2%; Score 9; DB 1
100.0%; Pred. No. 1.4
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYEC-) UNIV EAST CAROLINA.
(NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF19216 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
nes 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGGGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                      present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF19216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF1921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
```

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (C) is an have respiratory, bronchodilator, antisinflammatory, analgesic, immunosuppressive, antisathmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and expression and or activity of target polypeptides associated with communoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokines, endogenously produced specific and non-specific enzymes, chemokines, endogenously produced specific and non-nervous system (CNS) and peripheral nervous and non-nervous system (CNS) and peripheral nervous and non-nervous system peptide receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy is and/or condition selected from pulmonary vasociated with a disease or condition selected from pulmonary vasociated with a disease or condition selected from pulmonary vasociated with a disease or condition selected from pulmonary vasociated with a disease or condition selected from pulmonary vasociated with a disease or condition selected from pulmonary vasociated with a disease or condition selected from pulmonary vasociated with a disease or condition selected from pulmonary vasociated with a disease or condition selected from pulmonary vasociated with a disease or condition selected from pulmonary vasociated with a disease or pulmonary infections, bronchitis, and/or cancer. AAF18414 to AAF21543 represent human p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cytostatic; cardiant; vasotropic; vulnerary; antidiabetic; hypotensive; antiatherosclerotic; antilipemic; gene therapy; vector; SSRE; promoter; Shear Stress Response Element; antisense; ribozyme; repressor antibody; platelet derived growth factor A; PDGF-A; angiogenesis; ischaemia; cardiovascular disorder; neoplastic disorder; atherosclerosis; ss; hypertension; diabetes; hypercholesterolaemia; wound healing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56.2%; Score 9; DB 1; Length 11; 100.0%; Pred. No. 1.4e+02; live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Spl binding site as Shear Stress Response Element.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                   Claim 14; Page 118; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA70570 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-IL000702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-00220510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0113863P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-DEC-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 GGCCGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCCGCAT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200039275-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-DEC-1998;
24-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA70570;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 237
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
```

```
The invention relates to the construction of a vector which comprises a multiple number of Shear Stress Response Elements (SSRE) from various gene promoter sequences and one or more genes, antisense molecules, ribozymes, double stranded RNA, or a nucleic acid which encodes a repressor antibody or a mutant protein which inhibits the synthesis of, or activity of the protein or peptide. This sequence represents the Splanding sequence used as SSRE. The vector is useful for stimulating or inhibiting vascular endothelial cell or capillary endothelial cell proliferation and for stimulating angiogenesis in cells. The vector or gene of interest is useful for modulating vascular permeability in a mammal, for stimulating or inhibiting the formation, maturation or regression of blood vessels, modulating genes or proteins involved in a diseases, down regulating angiogenesis and for treating vasculogenic and/or angiogenic disorders. These disorders include cardiovascular disorder, hypercholesterolaemia and wound healing
                                                                                                                                response elements,
on, stimulating or down
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory; sucroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppresaive; cycostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy;
                                                                                                                                             useful for modulating endothelial cell proliferation, stimulating or dow -regulating angiogenesis and treating vasculogenic/angiogenic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56.2%; Score 9; DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human adenosine Al receptor antisense fragment no.773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pabalan J,
                                                                                                                            Expression vector comprising multiple shear stress
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 11 BP; 0 A; 2 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Pred. No. 1.4e+02; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                    Example 1; Page 45; 61pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABZ94910 standard; DNA; 11 BP
                 (FLOR-) FLORENCE MEDICAL LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17-OCT-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 GCGGGCGG 11
                                                                                       WPI; 2000-452382/39.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-OCT-2002.
                                                     Resnick N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce JW, 1
Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABZ94910;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 238
ABZ94910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  엄
```

Miller S, Tang L, Shahabuddin S;

WPI; 2003-093058/08

```
first active agent comprising an oligomuclectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nuclectides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention and an antiinflammatory teroid and ubiquinone. A composition of the invention immunosuppressive, and cytostatic activity. The composition may have a immunosuppressive, and cytostatic activity. The composition may have a immunosuppressive, and cytostatic activity. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis;
                                             Pharmaceutical composition for treating ailments associated with impaired
                                                                                                                                                                                                   The invention relates to a novel pharmaceutical composition, which has a
                                                                  respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Katz E, Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human adenosine Al receptor oligonucleotide fragment 773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56.2%; Score 9; DB 1; Length 11; 100.0%; Pred. No. 1.4e+02; ative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                         Disclosure; SEQ ID NO 10152; 872pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pulmonary transplantation rejection; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li Y, Sandrasagra A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            踞.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-APR-2001; 2001US-0286036P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABD18758 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GGGCGCCAT 10
WPI; 2003-229219/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200285309-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-OCT-2002
                                                                                                           ubiquinone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABD18758;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABD18758
    a
```

```
This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The cligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered cor availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and or surfactant hypoproduction are associated in fillammation, allergies and/or brundant proproduction are associated in the manner and allergies and/or brundant proproduction are associated in the manner and allergies and/or brundant and/or lung and allergies and or surfactant hypoproduction are associated and allergies and or surfactant the argument and allergies and or surfactant argument and a surfactant argument and allergies and or surfactant argument and allergies and or surfactant argument argument and argument and allergies and or surfactant argument argument argument and allergies and or surfactant argument argu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           with a disease or condition such as pulmonary vasoconstriction, furflammedion, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RT-PCR, primer; amplification; reverse transcription; RNA fingerprinting; differential gene expression; ss.
                                                                                                    Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted to nucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Random primed reverse transcription PCR primer 95.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11 BP; 2 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56.2%; Score 9; DB 1; Le 100.0%; Pred. No. 1.4e+02; ive 0; Mismatches 0;
                                                                                                                                                                                                                                                 Claim 15; SEQ ID NO 10152; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97WO-EP005290.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV18495 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 GGGCGCCAT 13
                                                                                                                                                                                             bronchodilating agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9813521-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-APR-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAV18495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 240
AAV18495/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
EXBXEXEXEX SXXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
```

```
The invention provides a method for the differential screening of gene expression by random primed reverse transcription PCR (RT-PCR). The primer sequences are generated by stimulating PCR reactions on non-redundant mammalian nucleotide sequence databank entries containing at least 1,000 bp of coding region. The primers selected, such as the present one, had to meet various criteria such as having an efficiency index between 2-10, having a selectivity index higher than 1, being 12 bp long i.e. 8 C or G and 4 T or A, and each primer differed from the others in at least 5 of the 8 bases at the 3'-end. The invention claims the selected primers make it possible to use internally primed, PCR-based RNA differential and province and systematic analysis of
                                                                                                                                                      Differential screening of gene expression by reverse transcription polymerase chain reaction - uses random priming with primers selected for high efficiency and selectivity by computer screening of database(s).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; ide nucleic acid; cytosine methylation; cardiovascular; primer; ss; ral nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              differential gene expression as an advantageous alternative to differential display. The method can also be useful for isolating new coding sequences and to compare known and new genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oligonucleotide primer SEQ ID NO 322859 for detecting SNP TSC0031084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56.2%; Score 9; DB 1; Length 12; 100.0%; Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 12 BP; 1 A; 4 C; 3 G; 3 T; 0 U; 1 Other;
                                                   (SANR-) FOND CENT SAN RAFFAELE DEL MONTE TABOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Pred. ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     χ,
                                                                                                                                                                                                                              Claim 9; Page 24; 37pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABI22886 standard; DNA; 12 BP.
                  96GB-00020216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-APR-2001; 2001WO-IB000713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIG-) EPIGENOMICS AG
                                                                                      Consalez G, Fesce R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7 GCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                       WPI; 1998-230725/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10 GCGGCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200177384-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AB122886;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 central
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 241
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
```

Gaps

```
This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligoners for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABC99989, ABF00010-ABF99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABE099989, ABE00010-ABE99999, ABE00010-ABH99989 and ABI00010-ABE82073 represent the oligomers described in the invention. NOTE: The sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Oligonucleotide primer SEQ ID NO 269661 for detecting SNP TSC0001842.
                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Set of oligonucleotides, useful for diagnosis and cell typing, addesigned to detect single-nucleotide polymorphisms and cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                  Claim 1; SEQ ID NO 322859; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; SEQ ID NO 269661; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                         56.2%; Score 9; DB 1; Length 12; 100.0%; Pred. No. 1.6e+02;
                                                                                                                                                                                                                                                                                                                                     Sequence 12 BP; 0 A; 5 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Preq. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ĸ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Berlin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABH69684 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-APR-2001; 2001WO-IB000713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                  9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGCGGGCG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 CGCCGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-657177/75.
methylation status.
                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200177384-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 242
ABH69684/c
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
```

BP.

```
ABI22877 standard; DNA; 12
                                                                                                    (first entry)
                                                                                                                                                                                                                               WO200177384-A2.
                                                                                                                                                                                                       Homo sapiens
                                                                                                    22-FEB-2002
                                                                                                                                                                                                                                                        18-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-FEB-2002
                                                                           ABI22877;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABI22881;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                           Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AB122881
ID AB12
XX
AC AB12
XX
DT 22-F
XX
XX
XX
KX
KW
SNP;
                                         AB12287
                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઢ
                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, contral nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABC99989, ABF00010-ABF9989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at
                                                                                                                                                                                                                                                                                                                    SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                            Oligonucleotide primer SEQ ID NO 289845 for detecting SNP TSC0014116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               oet or oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine methylation status.
                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID NO 289845; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               56.2%; Score 9; DB 1; Length 12; 100.0%; Pred. No. 1.6e+02; ive 0; Mismatches 0; Indels
                                                                           DB 1; Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12 BP; 2 A; 7 C; 3 G; 0 T; 0 U; 0 Other;
                                                  Sequence 12 BP; 1 A; 7 C; 2 G; 2 T; 0 U; 0 Other;
                                                                          Query Match 56.2%; Score 9; DB 1
Best Local Similarity 100.0%; Pred. No. 1.6
Matches 9; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   was obtained in electronic format from W.
ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Berlin
                                                                                                                                                                                                                  ABH89852 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-APR-2001; 2001WO-IB000713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                   22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIG-) EPIGENOMICS AG.
                                                                                                                            2 GGCGGGCGG 10
                                                                                                                                                    11 GGCGGGCGG 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CGGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                                                                                                 WO200177384-A2
                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                        18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Olek A,
8X3333
                                                                                                                                                                                                                  ò
                                                                                                                                                    g
                                                                                                                             δ
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This invention describes novel oligonuclectide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonuclectides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABC99989, ABF00010-ABF99989, ABH00010-ABH99989 and ABI00010-ABI82073 tepereent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at
                                                            SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS;
Oligonucleotide primer SEQ ID NO 322850 for detecting SNP TSC0031084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oligonucleotide primer SEQ ID NO 322854 for detecting SNP TSC0031084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Set of oligonucleotides, useful for diagnosis and cell typing, i designed to detect single-nucleotide polymorphisms and cytosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 322850; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1.6e+02;
es 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12 BP; 0 A; 3 C; 7 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56.2%; Score 9; DB 1
100.0%; Pred. No. 1.6
ative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                      06-APR-2001; 2001WO-IB000713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-APR-2000; 2000DE-01019173.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABI22881 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-657177/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 505555555
```

```
This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretracted genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010 +ABC99989, ABF00010-ABF9989, ABH00010-ABH99989 and ABI00010-ABH82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
nucleic acid; cytosine methylation; cardiovascular; primer; ss; nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oligonucleotide primer SEQ ID NO 322858 for detecting SNP TSC0031084.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                              Set of oligonucleotides, useful for diagnosis and cell typing, idesigned to detect single-nucleotide polymorphisms and cytosine methylation status.
                                                                                                                                                                                                                                                                                                                                                                              Claim 1; SEQ ID NO 322854; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                56.2%; Score 9; DB 1; Length 12; 100.0%; Pred. No. 1.6e+02; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 12 BP; 0 A; 4 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                   Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABI22885 standard; DNA; 12 BP.
                                                                                                                                                 36-APR-2001; 2001WO-IB000713
                                                                                                                                                                              07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-APR-2001; 2001WO-IB000713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 100.
Matches 9, Conservative
                                                                                                                                                                                                                                               Piepenbrock C,
                                                                                                                                                                                                               (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGCGGCG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                                                                                WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CGGCGGCG
                                                                              WO200177384-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200177384-A2
                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABI22885;
                                                                                                                                                                                                                                             Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 246
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

```
This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABC99989, ABF00010-ABF99989, and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic forms are from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Screening of INK4 family gene expression controller with e.g. p19 promoter, for use in preventives and remedies for cancer, hypoplastic anemia, hepatocirrhosis, myocardial infarction, apoplexy and wounds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INK4 family gene expression; INK4 family; cytostatic; antianaemic; hepatotropic; cerebroprotective; cardiant; vulnerary; cancer; hypoplastic anaemia; hepatocirrhosis; myocardial infarction; cerebral apoplexia; human; p19; promoter; ds.
                                                                                        Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                             Claim 1; SEQ ID NO 322858; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                  ', DB 1; Let.>
'''. 1.6e+02;
0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human p19 core promoter region sequence SEQ ID NO:9.
                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12 BP; 0 A; 4 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (KANS-) KANSAI TECHNOLOGY LICENSING ORG CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 56.2%; Score 9; DB 1
100.0%; Pred. No. 1.6
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                              was obtained in electronic format from WI ftp.wipo.int/pub/published_pct_sequences
                                  Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 6; Page 32; 68pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВР.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12-FEB-2002; 2002JP-00033724.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12-FEB-2003; 2003WO-JP001420.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADA37069 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-NOV-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
                                Piepenbrock C,
(EPIG-) EPIGENOMICS AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 ceeceeece 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6 909990990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2003-671660/63.
                                                                 WPI; 2001-657177/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2003068957-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-AUG-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADA37069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sakai T;
                                Olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADA37069,
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
```

comparing The present invention describes a method for screening controllers of INK4 family gene expression comprising: (a) contacting a test substance with test cells sustaining at least 1 structural gene located at a position at which it can be controlled by the promoter; and (b) comparine expression dose of such structural gene in the cells with that obtained in a non-contact run for selection of a substance affecting expression dose of such structural gene in the cells with that obtained dose of such structural gene in the cells. INK4 family gene expression controllers have cytostatic, antianaemic, hepatotropic, cerebroprotective, cardiant and vulnerary activities. The screened substances can be used in preventives and remedies for cancer, hypoplastic anaemia, hepatocirrhosis, myocardial infarction, cerebral apoplaxia and wounds. The present sequence represents a human pl9 core promoter region, f the property and the intervence of the inter Sequence 12 BP; 0 A; 7 C; 4 G; 1 T; 0 U; 0 Other; exemplification of the present invention. X8888888888888888888888888888888888

1.6e+02; \langle = 0; Indels Score 9; DB 1; Length 12; Pred. No. 1.6e+02; 0; Mismatches 0; Indels 100.0%; 56.2%; 9; Conservative 1 CGCCGGCG 9 9 cecceece 1 Query Match Best Local Similarity Matches 셤

ADE14348 standard; DNA; 12 BP. (first entry) 29-JAN-2004 ADE14348; RESULT 248 ADE14348/

Optineurin promoter motif, repeat element or regulatory region #457.

Human; optineurin; ds; ophthalmological; single nucleotide polymorphism; SNP; glaucoma; progressive ocular hypertensive disorder; glaucoma related disorder; motif; repeat element; regulatory region.

Homo sapiens,

US2003190617-A1. 09-0CT-2003 06-MAR-2002; 2002US-00091281

06-MAR-2002; 2002US-00091281 SIEE/) SI E.

(RAYM/) RAYMOND V. (MORI/) MORISSETTE J. RAYMOND V.

ü Si. Raymond V, Morissette J,

WPI; 2003-864168/80.

New nucleic acid sequences of the optineurin gene are useful to detect polymorphisms particularly single nucleotide polymorphisms in the optineurin promoter to diagnose, prognose and treat glaucoma and related disorders

Claim 11; SEQ ID NO 459; 159pp; English

least 20 but not more than 1500 consecutive nucleotides of the optimeurin promoter appearing as ADE13890. Also included are the optimeurin promoter operably linked to a heterologous nucleic acid, a nucleic acid capable of detecting a single nucleotide polymorphism (SNP) in the optimeurin promoter, a host cell comprising the promoter operably linked to a heterologous sequence, diagnosing or prognosing glaucoma in a sample The invention relates to an isolated nucleic acid (N1) comprising at

in a sample containing DNA, determining the presence or increased susceptibility to glaucoma or to a progressive ocular hypertensive disorder resulting in loss of visual field in a patient (or the severity or progression of glaucoma in a patient, comprising providing amplification reaction primers that direct amplification of a selected nucleic acid region containing the variation within the optimeurin promoter and amplifying the DNA burning appropriation of a selected obtaining a sample containing human genomic DNA, providing a nucleic acid capable of detecting a SNP located within an optimeurin promoter, and detecting the polymorphism). The invention is used to diagnose and prognose glaucoma and also to treat glaucoma related disorders. The present sequence is an optimeurin promoter motif, repeat element or obtained from a cell or bodily fluid (comprising detecting a polymorphism in a promoter region of the optineurin gene, associated with a glaucoma phenotype), detecting a SNP sequence variation in a sample containing NNA, detecting the presence of an optineurin promoter sequence variation putative regulatory region. \$

Sequence 12 BP; 1 A; 7 C; 4 G; 0 T; 0 U; 0 Other;

Gaps ., 0 56.2%; Score 9; DB 1; Length 12; 100.0%; Pred. No. 1.6e+02; rative 0; Mismatches 0; Indels 9; Conservative Local Similarity Query Match Matches

ö

σ 1 CGGCGGGCG ceeceeece

à d

ö

Gaps

..

AAQ80639 standard; DNA; 12 BP. AAQ80639; AAQ80639,

(revised)
(first entry) 25-MAR-2003 03-NOV-1995

Neisseria gonorrhoeae detection PCR antisense primer Pn B2.

88. Primer; PCR; LCR; amplification; Neisseria gonorrhoeae pilE gene;

Synthetic.

WO9506749-A1

09-MAR-1995.

94WO-US009318, 18-AUG-1994;

(ABBO) ABBOTT LAB.

93US-00116388

03-SEP-1993;

Winkler JK; Ohhashi Y, Ching S, Birkenmeyer LG,

WPI; 1995-115461/15.

Detection of Neisseria gonorrhoeae DNA - using oligo:nucleotide probes and primers based on the pilE gene of N. gonorrhoeae.

Claim 1; Page 5; 29pp; English.

Primers AAQ80633-39 are primers synthesised based on the sequence of the Neisseria gonorrhoeae pilE gene between bases 827-972 (see AAQ80641). This primer is based on the sequence between bases 945-934 of the pilE gene. The primers can be used to PCR amplify this region for detection by hybridisation with probe AAQ80640. The primers are used in primers sets: the forward primers being AAQ80631, AAQ80635, AAQ80636 or AAQ80638 and the reverse primers: AAQ80631 or 80639. These primers and those in AAQ80642-5 can be used in kits for the detection of N.gonorrhoeae infections. (Updated on 25-MAR-2003 to correct PN field.)

12

ઠે 셤

S

RESULT 250

AAA53932,

AAA53932;

```
This invention describes a novel catalytic RNA molecule which is directed against mRNA molecules (II) which encode the cell-relevant protein cyclin B or E2F1. The products of the invention have vasotropic activity and can be used for gene tharapy. The use of (I), or a DNA molecule or a plasmid of the invention is claimed for obtaining a vector for gene therapy and for inhibiting restenosis of blood vessel after angloplasty; therapeutic compositions containing these components are also claimed. (I) efficiently induces cell cycle arrest by combined inactivation of cyclin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New catalytically acting RNA molecule comprising hammerhead ribozyme directed against mRNA molecules encoding cyclin E or E2F1, useful for inhibiting vascular smooth muscle cell proliferation and restenosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oligonucleotide primer SEQ ID NO 311797 for detecting SNP TSC0024693.
                                                                                                                                                                                                                         Hammerhead ribozyme; cyclin E; restenosis; catalytic; angioplasty; cyclin E2F1; vasotropic; gene tharapy; cell cycle arrest; ss.
                                                                                                                                                                              Cyclin E2F1 binding hammerhead ribozyme 5' RNA fragment SEQ ID 15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55.0%; Score 8.8; DB 1; Length 12; 83.3%; Pred. No. 1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12 BP; 2 A; 6 C; 3 G; 0 T; 1 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYTU-) UNIV TUEBINGEN EBERHARD-KARLS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 10; Page 27; 40pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kandolf R;
                                                     BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABI11824 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-EP007049.
                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-EP007049.
                                                   AAF61446 standard; RNA; 12
                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12 GGCGGACGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-257985/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kuhn AC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                WO200121789-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200177384-A2
                                                                                                                                                                                                                                                                                                                                                                                                                       22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                      18-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                          29-MAR-2001
                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Grassi G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E and E2F1
                                                                                           AAF61446;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A recombinant Adenylyl cyclase is described which lacks membrane bound domains. Separation and purification of the recombinant enzyme is much easier compared with wild type enzymes and the recombinant enzyme is more stable than the wild type enzyme which allows easier screening of compounds that stimulate and inhibit Adenylyl cyclase activity. The compinant adenylyl cyclase comprises a chimera of adenylyl cyclase C_1 and C_2 domains linked covalently. The domains may be linked by a linker peptide. The recombinant adenylyl cyclase is useful for screening inhibitors and stimulators of adenylyl cyclase activity. Inhibitors of the enzyme are useful for treating cholera, pituitary tumors, heart failure, ischaemais, endocrine disorders and cell necrosis. Stimulators of adenylyl cyclase are useful for treating pseudohypoparathyroidism and other endocrine deficiencies
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Adenylyl cyclase; type I; type II; recombinant; enzyme; cAMP; cyclic AMP; adenosine monophosphate; screening; stimulation; inhibition; treatment; cholera; pituitary tumour; heart failure; ischaemia; endocrine disorder; cell necrosis; pseudohypoparathyroidism; endocrine deficiency; human; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel soluble mammalian polypeptide composition comprising adenylyl cyclase activity for screening stimulators and inhibitors of adenylyl cyclase, is activated by Gsalpha.
                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                          Oligonucleotide linker used in adenylyl cyclase C_1/C_2 chimera.
                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                          Score 8.8; DB 1; Length 12;
Pred. No. 1.8e+02;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55.0%; Score 8.8; DB 1; Length 12; 83.3%; Pred. No. 1.8e+02; ive 0; Mismatches 2; Indels
Sequence 12 BP; 2 A; 8 C; 2 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 12 BP; 2 A; 5 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 3; Col 19; 73pp; English.
                                                                                                                                                                                                                                                                               AAA53932 standard; DNA; 12 BP.
                                            55.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96US-00726214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95US-0005498P
                                                                                                                                                                                                                                                                                                                                                                    03-JAN-2001 (first entry)
                               Query Match
Best Local Similarity 83.3
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TEXA ) UNIV TEXAS SYSTEM
                                                                                                                             5 GGCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity 83.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GCGGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGGAGGCATC 1
                                                                                                                                                                     GGCCGGGTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-578539/54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tang W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                04-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-OCT-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US6107076-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-AUG-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gilman AG,
```

ö

Gaps

ö

2; Indels

Query Match

Best Loc Matches

ઠે

```
antibiotics.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-FEB-1990.
                                                                                                                                                                                                                                                                                                                                                                                          09-JAN-2003
02-AUG-1990
                                                                                                                                                                                                                                                                                                                                                                               25-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP354641-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                           AAQ01757;
                                                                                                                                                                                                                                                                                  12
                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Epp JK,
                                                                                                                                                                                                                                                                                                                  RESULT 254
                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Car
                                                                                                                                                                                                                                                                                                                              AAQ01757
ò
                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                         ô
                                                                                                                                                                                              This invention describes novel oligonucleotide primers or peptide nucleic acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genemic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABE99989, ABF00010-ABE99989, ABH00010-ABH99989 and ABI00010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oligonucleotide primer SEQ ID NO 299697 for detecting SNP TSC0018689.
                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                    Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine
                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                           Claim 1; SEQ ID NO 311797; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                          55.0%; Score 8.8; DB 1; Length 12; 83.3%; Pred. No. 1.8e+02;
                                                                                                                                                                                                                                                                                                                                                                               2; Indels
                                                                                                                                                                                                                                                                                                                                       Sequence 12 BP; 0 A; 2 C; 8 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Berlin K;
                                                                                           Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABH99704 standard; DNA; 12 BP.
                             06-APR-2001; 2001WO-IB000713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-APR-2001; 2001WO-IB000713
                                                   07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 83.3
hes 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                    2 GGCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                        1 GGTGGGCGCGT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Olek A, Piepenbrock C,
                                                                                          Olek A, Piepenbrock C,
                                                                      (EPIG-) EPIGENOMICS
                                                                                                               WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (EPIG-) EPIGENOMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-657177/75
                                                                                                                                                         methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200177384-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-OCT-2001.
        18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABH99704;
                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                       요
```

```
acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABC9989, ABC0010-ABE9989, ABH0010-ABH99989 and ABI0010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent din not form part of the printed specification, but was obtained in electronic format from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The method it is used in involves creating gene libraries of antibiotic-producing organisms, probing them with it, and isolating antibiotic biosynthetic or resistance-conferring genes which hybridize to it. (Updated on 09-JAN-2003 to add missing OS field.) (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                               This invention describes novel oligonucleotide primers or peptide nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cells to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Regulatory sequence probe used to isolate antibiotic biosynthetic or resistance-conferring genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Car E gene encoding 4"-O-isovaleryl:acylase - used to transform cellincrease prodn. of carbomycin or other antibiotics or to produce new
Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                        Claim 1; SEQ ID NO 299697; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 8.8; DB 1; Length 12;
Pred. No. 1.8e+02;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Antibiotic biosynthetic gene; resistance-conferring gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 12 BP; 2 A; 8 C; 1 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 13; Page 21; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAQ01757 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            55.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     89EP-00304716.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88US-00194672.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 83.3
nes 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 GGGGGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCCGGATGGT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               & CO ELI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schoner BE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1990-046338/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ELIL ) LILLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-MAY-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            13-MAY-1988;
```

S

ઠે

ö

```
g
                                                                           ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine Al receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary cructure of this targets mRNA. The adenosine receptor mRNA secondary cructure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or protein conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult
                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                            Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .r.
/ oteg= a
/notee= "contains phosphorothioate internucleotide
linkages"
                                                                       ;
0
                                                                                                                                                                                                                                                                                                                          Antisense oligonucleotide 756, targeting adenosine Al receptor.
                                     Length 10;
                                                                     1; Indels
Sequence 10 BP; 0 A; 6 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 2 A; 2 C; 6 G; 0 T; 0 U; 0 Other;
                                 Score 8.4; DB 1;
Pred. No. 1.7e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 12; Page 8-24; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       respiratory system, suitable for l
respiratory distress syndrome etc.
                                                                   ·
.
                                                                                                                                                                                                                        AAV47256 standard; DNA; 10 BP.
                                 52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                          10-NOV-1998 (first entry)
                                                                   Conservative
                                                                                                    1 CGGCGGGCGG 10
                                                                                                                                      CGGCGGACGG 1
                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                          AAV47256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                        RESULT
```

```
Sequences AAV46501-V47446 are anti-sense oligonuclectides that target the human adenosine A1 receptor, the design of which required the secondary controlled this targets mRNA. The adenosine receptor mRNA secondary structure of this targets mRNA. The adenosine receptor mRNA secondary controlled the analysed and used to construct antisense coligonucleotides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their containing either a junction between the introl and exon, or where they containing either a junction between the introl and exon, or where they may overlap the initiation codon. The receptor is a member of the G-containing coupled family of cell surface receptors that have 7.

The antisense conditions associated with bronchoconstriction and/or lung conditions associated with animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= a
/note= "contains phosphorothioate internucleotide
                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Antisense oligonucleotide 736, targeting adenosine Al receptor.
   Score 8.4; DB 1; Length 10;
Pred. No. 1.7e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                  AAV47236 standard; DNA; 10 BP.
52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97WO-US022017.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linkages"
                                                                        9; Conservative
                                                                                                                                         3 GCGGCGGCA 12
                                                                                                                                                                                     GAGGCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-322464/28.
Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  04-JUN-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV47236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW;
                                                                                                                                                                                                                                                                                                                                                     AAV47236
```

```
;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 inflammation in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult
Gaps
                                                                                                                                                                                                                                                                                                          conchoconstriction; lung inflammation; asthma; pulmonary disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                           /*tag= a
/note= "contains phosphorothioate internucleotide
                                                                                                                                                                                                                                                                                     Secondary structure; mRNA; phosphorothioate backbone; G-protein;
 ö
                                                                                                                                                                                                                                                     Antisense oligonucleotide 810, targeting adenosine Al receptor.
 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
 ..
H
Mismatches
                                                                                                                                                                                                                                                                                                                         allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        respiratory distress syndrome etc.
 .
0
                                                                                                                                                 AAV47310 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                    10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linkages"
9; Conservative
                                                             10
                               2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1998-322464/28.
                                                               1 GGAGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                            Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9823294-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                    AAV47310;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW;
                                                                                                                  RESULT 257
Matches
                                                                                                                                                                  ò
                                                               셤
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, coding and
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
cend and the juxta-section between coding and non-coding regions and all
segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense coligonucleotides may be derived
from sequences AAX5512-4. These multiple target oligonucleotides
from sequences AAX55180-271) can be used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
casociated with impaired respiration and inflammation, allergic rhinitis,
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
distant asthma, allergies, asthma, impeded respiration,
cultures syndrome, pain, cystic fibrosis, pulmonary hypertension,
cultures avoconstriction, emphysema, chronic obstructive pulmonary
disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, panceratic cancer,
choncancer, breast cancer, lung cancer, metastasized
well as all types of cancers which may metastasize or have metastasized
                                                                                                                                                                                                                                                                                         Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New antisense oligonucleotides used in treatment of, e.g. pulmonary vasoconstriction.
                                                                                                                                                                                                                                                          Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 8.4; DB 1; Length 10; Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 40; 120pp; English.
                                                                                                                                      BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-0059160P.
98US-00093972.
                                                                                                                                      AAX53687 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                  (first entry)
GGCGGCATCG 15
                                   1 GGCGGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prostate cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-JUN-1998;
                                                                                                                                                                                                                    05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                            AAX53687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nyce JW;
                                                                                            RESULT 2.
                                                                                                                                                         ઠ
                                 d
```

Gaps

;

Similarity 90.0%; Pred. No. 1.7e+02; 9; Conservative 0; Mismatches 1; Indels

Query Match Best Local Similarity Matches 9; Conserval

```
Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                  New antisense oligonucleotides used in treatment of, e.g. pulmonary
  ö
                                                                                                                                           Human adenosine Al receptor antisense oligonucleotide fragment.
  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to the lungs, including breast and prostate cancer
  1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 10 BP; 2 A; 2 C; 6 G; 0 T; 0 U; 0 Other;
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 39; 120pp; English.
 ö
                                                                                  AAX53633 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                               97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                            98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA.
                                                                                                                       05-JUL-1999 (first entry)
9; Conservative
                  6 GGCGCCATCG 15
                                   1 Gececeares 10
                                                                                                                                                                                                                                                  prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                              vasoconstriction.
                                                                                                                                                                                                                                                                                                                            17-SEP-1998;
                                                                                                                                                                                                                                                                                       WO9913886-A1
                                                                                                                                                                                                                                                                                                                                               17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                         09-JUN-1998;
                                                                                                                                                                                                                                                                                                          25-MAR-1999
                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                              Nyce JW;
Matches
                  ઠે
                                    셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX5520-74. These multiple target oligonucleotides (specifically AAX55180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis, acute asthma, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary by asyndrome, pain, cystic fibrosis, pulmonary hypertension, pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancreatic cancer, hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                               impaired respiration; infimmation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pencreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                               Antisense oligonucleotide; multiple target; antisense treatment;
                                               ö
                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor antisense oligonucleotide fragment.
  Score 8.4; DB 1; Length 10;
Pred. No. 1.7e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 39; 120pp; English.
                                                                                                                                                                                                                              AAX53613 standard; DNA; 10 BP.
52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-0059160P
98US-00093972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                              (first entry)
Query Match
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                    3 GCGGGCGGCA 12
                                                                                                                  GAGGCGGCA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vasoconstriction
                                                                                                                                                                                                                                                                                                              05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-SEP-1997;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nyce JW;
                                                                                                                                                                                                          AAX53613
                                                                                                                        셤
                                                                                                                                                                                                                                                                         ઠે
```

င္တ

셤 ઠ

```
888888
                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of disease associated with inflammation, inpaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating cet of including lung distriction, allergies, asthma, implement of disease syndrome, pain, cystic impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONS reduces side effects. The A-containing ONS break down with the concludes adenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the curdencing given in the sequence listing from the present convented invented as given in the sequence listing from the present convented invented on SEQ ID NO:1 to 2815, and then the last 185 carcinomas are also called SEQ ID NO:1 to 185, but the sequences differ
                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                            Human, adenosine receptor, low adenosine antisense oligonucleotide, phosphorothioate, impaired respiration, inflammation, allergy, allergic disease; bronchoconstriction, inhibitor; antiinflammatory,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                     ;
                                       52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02;
                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                    Low adenosine antisense oligonucleotide SEQ ID NO:819.
BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 18; Page 368; 1343pp; English.
                                                                                                                                                                                                                                                                            AAA33130 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0095212P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                     Conservative
                                                                                                                                                                    10
                                                                                                                             2 GGCGGGCGGC 11
                                                                                                                                                                    GGAGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-205971/18.
                                                             Local Similarity
nes 9, Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                             28-JUL-2000
  Sequence 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24-FEB-2000
                                                                                                                                                                                                                                                                                                                 AAA33130;
                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancers.
                                                                                                                                                                                                                                  RESULT 261
                                                                                   Matches
                                                                                                                                                                                                                                                      AAA3313
```

ö The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, and an have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating effects afflict the lungs of a subject. They can be used for treating impeded respiration, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive fubrosis, pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the om the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to A333992) are specifically claimed ONs from the present invention. N.B. quences given in the disclosure of the present invention do not match with their corresponding SEQ ID NO: sequences given in the sequence Human, adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioare; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antinflammaty; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss. Gaps New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or .. 0 Length 10 1; Indels Low adenosine antisense oligonucleotide SEQ ID NO:745. Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other; Score 8.4; DB 1; Pred. No. 1.7e+02;); Mismatches 1; Claim 18; Page 359; 1343pp; English. .; 0 AAA33056 standard; DNA; 10 BP. 99WO-US017712. 98US-0095212P. 52.5%; (UYEC-) UNIV EAST CAROLINA. 28-JUL-2000 (first entry) Query Match
Best Local Similarity 90.0
Matches 9; Conservative 6 GGCGGCATCG 15 1 GGCGGCATGG 10 WPI; 2000-205971/18. WO200009525-A2 Homo sapiens. 03-AUG-1999; 03-AUG-1998; 24-FEB-2000. Sequences AAA33992) AAA33056; Nyce JW; listing cancers RESULT 262

```
ö
ONs reduces side effects. The A-containing ONs break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA33313 to AAA33312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1860 (AAA33333 to AAA3392) are specifically claimed ONS from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antiasthmatic, cytostatic and analgesic activities. The compositions are impaired airways, including lung disease associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergy disease; bronchoconstriction; inhibitor; antinflammatory; antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                          52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Low adenosine antisense oligonucleotide SEQ ID NO:765.
                                                                                                                                                                                                                                                 Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 18; Page 362; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAA33076 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0095212P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                            GGCGGCCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                GGAGGGGGGC 10
                                                                                                                                                                                                                                                                    Ouery Match
Best Local Similarity
9; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ното варіепв.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA33076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancers.
                                                                                                                                                                                                             listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA33076
      888888888888888888
                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                셤
```

```
impeded respiration, respiratory distress syndrome, pain, cystic impeded respiration, respiratory distress syndrome, pain, cystic fibroars, pulmonary hypetrension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the constant and prostate cancer. The A-containing ONs break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the nucleoride sequences given in the sequence listing from the present invention, which correspond to SEQ ID No:1 to 2815, and then the last 185 sequences are also called SEQ ID No:1 to 185, but the sequence differ from the previously named sequences. SEQ ID No:11 to 1680 (AAA3233 to AAA3392) are specifically claimed ONS from the present invention. N.B. Sequences given in the disclosure of the present invention do not match or with their corresponding SEO ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ80767 to AAZ83941 represent tags corresponding to distinct transcripts that are preferentially transcribed in the metastatic breast tumour
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Metastatic breast tumour cell upregulated transcript tag #2447.
                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; metastatic breast tumour tissue; breast cancer; tag; pr.
non-metastatic breast tumour tissue; gene therapy; anticancer;
antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                      Score 8.4; DB 1; Length 10;
Pred. No. 1.7e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                       Sequence 10 BP; 2 A; 2 C; 6 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 125; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВЪ.
                                                                                                                                                                                                                                                                                                                                                      52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99WO-US013647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0089853P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0089997P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0090040P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAZ83213 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                          9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GAGGGCGGCA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GENZ ) GENZYME CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ROBERTS B L.
                                                                                                                                                                                                                                                                                                                                                                                                                           3 GCGGGCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-106079/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treatment of cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SHAN/) SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-UN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ83213;
                                                                                                                                                                                                                                                                                      listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 264
                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ83213,
     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
```

```
tissue (i.e. are upregulated in metastatic breast tumour cells). AA283942

C to AA286677 represent tags corresponding to distinct transcripts that are

CC transcribed in the primary or non-metastatic breast tumour

CC tissue (i.e. are downregulated in metastatic breast tumour cells). These

CC transcripts can be used for diagnosis, prognosis, monitoring and

CC transcripts can be used for diagnosis, prognosis, monitoring and

CC transcripts can cancer, particularly where metastatic. Diagnosis is

CC transcripts are used to direct sexpression of the transcripts are potentially

CC ompounds that modulate expression of the transcripts are potentially

CC ompounds that modulate expression of the transcripts are potentially

CC office transcripts are used to direct expression, in selected cell types, of

CC e.g. the transcripts are used to direct expression, in selected cell types, of

CC yaccines, Polypeptides encoded by the transcripts are also useful in

CV vaccines, for diagnosing breast cancer and for raising specific

antibodies (Ab). Ab are used to detect the polypeptides or as therapeutic

CC agents. Host cells that produce the polypeptides can be used to expand

CC agents. Host cells that produce the polypeptides can be used to expand

CC alls, e.g. cytotoxic T lymphocytes, and these used for adoptive

CC immunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                     ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Metastatic breast tumour cell upregulated transcript tag #3032.
                                                                                                                                                                                                                                                                                                                                                                                                   Score 8.4; DB 1; Length 10; Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                Seguence 10 BP; 0 A; 6 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 140; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВР.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0089853P.
98US-0089997P.
98US-0090039P.
98US-0090040P.
                                                                                                                                                                                                                                                                                                                                                                                                   52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US013647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZ83798 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                     9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 GGCAGGCGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENZ ) GENZYME CORP. ROBE/) ROBERTS B L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-106079/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 gecegeceec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  treatment of cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ83798;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Roberts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SHAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 265
                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ83798/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8899999999999998888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

```
that are preferentially transcribed in the metastatic breast tumour cells). AAZ80767 to AAZ80341 represent tags corresponding to distinct transcripts that are preferentially transcribed in the metastatic breast tumour cells). AAZ86577 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). These transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and treatment of breast cancer, particularly where metastatic. Diagnosis is by standard immunoassays or hybridisation/amplification reactions. Compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. theorapeutic genes (also ribozymes or antisense sequences), particularly an antigen-encoding sequence for use in gene or cell-based vaccines; for diagnosing breast cancer and for raising specific transcribes (Ab). Ab are used to detect the polypeptides or as therapeutic and isolate populations of educated, antigen-specific immune effecter immorberance cells, e.g. cytotoxic T lymphocytes, and these used for adoptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine A2a receptor; adenosine A3 receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel composition for treating or preventing e.g. cardiopulmonary and renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:699.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 2 A; 3 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA03415 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0088501P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0088657P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7 GCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GCAGCATCGT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW, Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                        immunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAA03415;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA03415
       8888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

```
8
                           The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine A2a receptor agonist (Ia), or an oligonucleotide and so is an expension of the containing less than 15¢ adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (1.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A, A2b or A3 receptors, and segments of mRNA encoding the adenosine A, A2b or A3 receptors, and last and optionally at this receptor). (I) may be a mixture of (Ia) and Optionally at this receptor). (I) may be a mixture of (Ia) and Optionally at this receptor). (I) may be a mixture of (Ia) compositions are used to prevent, alleviate and/or treat adenosine compositions are used to prevent, alleviate and/or treat adenosine (particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular atchycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with administration of stress-test agents, particularly where such conditions are associated with administration of stress-test agents, particularly where such conditions are associated with administration of stress-test agents, particularly where such conditions are associated with administration of stress-test agents, particularly where such conditions are associated with administration of stress and seculated 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                    AAA03715 represent specifically claimed phosphorothioate antisense oligonuclectides for use in the composition of the present invention. AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other phosphorothioate oligonuclectides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:719.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; adenosine Al receptor; antisense oligonucleotide; hypoxia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 8.4; DB 1; Length 10;
Pred. No. 1.7e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
 Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA03435 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0088501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GGAGGGCGCC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9963938-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAA03435;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
8
```

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits

Cd adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

C(I) is an adenosine Aza receptor agonist (Ia), or an oligonucleotide

C(Ib), containing less than 15% adenosine (A), that is antisense to target

CC (Ib), containing less than 15% adenosine (A), that is antisense to target

CC (ID), containing RNA, to genomic flanking regions (i.e. 5' or 3'

C ends or segments between coding and non-coding sequences), or to all

CC (Bas Al, Azb or Al agonist activity or Aza antagonist activity (or at

CC (Bas Al), Azb or Al agonist activity or Aza antagonist activity (or at

CC (Bas Al), and optionally also contains one or more surfactants. The

CC (Compositions are used to prevent, alleviate and/or treat adenosine

CC (particularly where associated with ischaemia, toxin release and/or

CC (Barticularly where associated with ischaemia, toxin release and/or

CC (Barticularly where associated with ischaemia, toxin release and/or

CC (Barticularly where associated with sepains); (adult) respiratory distress syndrome

CC (B. associated with sepsis); allorgic rhinitis; chronic obstructive

CC (Barticularly where associated with administration

CC (Barticularly where sectionallarly where such conditions are associated

CC (Barticularly where agents, particularly where such conditions are associated

CC (Barticularly where agents, particularly where such conditions are associated

CC (Barticularly where agents, particularly where such conditions are associated

CC (Barticularly and AAA02717, AAA027121 and AAA02721 and AAA02721 and AAA03715 represent interaction. AAA02717, AAA03712 and AAA037212 and 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                             composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other phosphorothioate oligonucleotides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine As receptor; adenosine As receptor; phosphorothicate; cardioqualmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; anti-chiammatory; anti-hypoxic; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:773.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 2 A; 2 C; 6 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                       Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAA03489 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0088501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 GCGGGCGCCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GAGGGCGGCA 10
WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA03489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                          renal
                                                                                             Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 268
AAA03489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
```

WO200062736-A2

```
The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine Aza receptor agonist (Ia), or an oligonucleotide compositions are corresponding succeptor agonist (Ia), that is antisense to target compositions or corresponding RNA, to genomic flanking regions (Ie. 5' or 3') and so resements between coding and non-coding sequences), or to all sequences of mRNA encoding the adenosine Al, AZa, AZb or Al agonist activity or AZa antagonist activity (or at least no agonist activity or AZa antagonist activity (or at least no agonist activity or AZa antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and (Ib), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine for receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with administration of series agents, particularly where such conditions are associated with acute inflammation. AAAO2717, AAAO2721 and AAAO3721 and AAAO3721 and AAAO3721 and AAAO371 and AAAO371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; respiratory distress syndrome; pulmonary vasoconstriction, asthma; RDS; respiratory distress syndrome; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                            composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               represent other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        phosphorothicate oligonuclectides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human adenosine Al receptor polynucleotide fragment #745.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                                                                      Claim 17; Page 35; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF19178 standard; DNA; 10 BP.
98US-00093972.
98US-0088657P.
                                                                               (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 GGCGGCATCG 15
                                                                                                                                                                                     WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGCGGCATGG
                                                                                                                                   Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      present invention
                                                                                                                                                                                                                                                                    renal injury.
     09-JUN-1998;
                           09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF19178;
                                                                                                                                      Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 269
                                                                                                                                                                                                                                            Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF19178
  d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠે
```

```
The present invention describes low adenosine (A) content antisense oligonuclectides and compositions (I) comprising them. In the antisense oligonuclectides and compositions (I) comprising them. In the antisense oligonuclectides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonuclectides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and malignancies, transcription factors, immunoglobulins and antibodyse antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradykinin receptors, central chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (UNS) and peripheral nervous and non-nervous systems.
                                                                                                                                                                                                                                                                                                                                      Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         receptors, CNS and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 8.4; DB 1; Length 10;
Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human adenosine Al receptor polynucleotide fragment #819.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 14; Page 117; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP.
                                                                                                         24-MAR-2000; 2000WO-US008020.
                                                                                                                                                 99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52.5%;
90.0%;
                                                                                                                                                                                         (UYEC-) UNIV BAST CAROLINA. (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF19252 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GGAGGGCGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the present invention
                                                                                                                                                                                                                                                                                                WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                   06-APR-1999;
                                                            26-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAF19252;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                          Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF19252
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ****
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
```

ö

Homo sapiens

respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; cancer; 88.

Homo sapiens.

WO200062736-A2.

26-OCT-2000

24-MAR-2000; 2000WO-US008020.

99US-0127958P 06-APR-1999;

(UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.

Nyce JW;

WPI; 2000-679539/66.

Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.

Claim 14; Page 118; 1592pp; English.

The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (II) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with ungivespiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system creceptors, defensins, growth factors, vasocative peptides and receptors, binding proteins and malignancy associated proteins. The artisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome condition selected from pulmonary associated with a disease (CNDD) when any proprious condition and proprious condition, respiratory distress syndrome condition and proprious condition, respiratory distress syndrome condition and proprious condition, respiratory distress syndrome condition condition and proprious conditio pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of hypertension, emphysema, chronic obstructive pulmonary disease (COPD)

Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;

the present invention

Gaps ö Score 8.4; DB 1; Length 10; Pred. No. 1.7e+02; 0; Mismatches 1; Indels 52.5%; 90.0%; 9; Conservative Query Match Best Local Similarity Matches

ö

ઠે 셤

AAF19198

AAF19198 standard; DNA; 10 BP.

AAF19198;

(first entry) 14-MAR-2001

Human adenosine Al receptor polynucleotide fragment #765.

human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary obstruction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; adenosine antisense oligonucleotide; phosphorothioate; allergy; cancer; ss

Homo sapiens.

WO200062736-A2.

26-OCT-2000.

24-MAR-2000; 2000WO-US008020.

06-APR-1999;

(UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.

Nyce JW;

WPI; 2000-679539/66.

Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.

Claim 14; Page 117; 1592pp; English.

The present interiton describes low adenosine (A) content antisense oligonucleotides and compositions (I) composition than the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with cury disorders and malignancies, usen as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and cativating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokine and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies activities and non-receptors. Committees, adhesion molecules and non-receptors, cretaying proteins, adenosine receptors, bradykinin receptors, central creceptors, and peripheral nervous and non-nervous system peptide creceptors. And peripheral nervous and non-nervous system peripheral nervous and non-nervous system creceptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction and/or lung inflammation, allergy(ies) and/or suddition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide The present invention describes low adenosine (A) content antisense

ន្តដូន

ò 유

888888 ઠે 셤 The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previously assigned open reading frame, or nonanotated ORF) genes comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (M1) of using NORF genes to affect the cell cycle comprising administering a NORF gene whose expression varies by at least 10% between any two phases of the cell cycle selected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate cell; and (b) monitoring expression of a NORF gene whose expression of antifungal drugs comprising: (a) contacting a test substance which a yeast cell; and (b) monitoring expression of a NORF gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human genes which are involved in cell cycle progression comprising contacting human DNA with a probe which comprises at least 10 contiguous nucleotides of a NORF gene whose expression varies as in M1; contiguous nucleotides of a NORF gene whose expression in a contiguous nucleotides of a NORF gene whose expression in a contiguous nucleotides of a NORF gene whose expression in a yeast cell comprising contacting a yeast cell with a candidate drug and contacting expression in the yeast cell of at least 1 NORF gene whose contropring expression in the yeast cell of at least 1 NORF gene whose contropring expression in the yeast cell of at least 1 NORF gene whose contropring expression in the yeast cell of at least 1 NORF gene whose controprises of the cell cycle, the differentially contacting as markers of the cell cycle, the differentially ö Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle. fragments and antisense oligonucleotides used in the exemplification of Gaps Yeast; Saccharomyces cerevisiae; characterisation; cell cycle; NORF; nor previously assigned open reading frame; nonannotated ORF; SACB; serial analysis of gene expression; antifungal; tag; identification; linker; PCR primer; ds. ö Score 8.4; DB 1; Length 10; Pred. No. 1.7e+02; 1, Indels Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:11348. Sequence 10 BP; 2 A; 2 C; 6 G; 0 T; 0 U; 0 Other; 0; Mismatches Kinzler K; Example; Page 355; 419pp; English. AAF43209 standard; DNA; 10 BP. Vogelstein B, 14-JUN-2000; 2000WO-US016223 52.5**%**; 90.0**%**; 99US-00335032 (UYJO) UNIV JOHNS HOPKINS (first entry) 9; Conservative Saccharomyces cerevisiae. 3 GCGGGCGGCA 12 GAGGCGGCA 10 the present invention WPI; 2001-061874/07. Query Match Best Local Similarity WO200077214-A2. Velculescu V, 16-JUN-1999; 23-MAR-2001 21-DEC-2000 AAF43209; Matches

```
The invention relates to genotyping human galanin receptor (GALRI) gene of an individual, involving determining for the two copies of the GALRI gene present in the individual, the identity of the nucleotide pair at one or more polymorphic sites. The method is useful for determining the or more polymorphic sites. The method is useful for determining whether an individual has a haplotype or haplotype pairs defined in the specification. This is useful for improving the efficacy and reliability of specification. This is useful for improving the efficacy and reliability of seases associated with GALRI activity, e.g., infectious diarrhoea and ciscases associated with GALRI activity, and in the design of clinical trials of candidate drugs for treating a specific condition or disease predicted to be associated with GALRI activity. The method is useful to screen for compounds transcring GALRI to treat a specific conditions or disease associated with GALRI activity. The method is useful to screen for compounds the expression and function of GALRI, and in expressing GALRI protein for use in screening for candidate drugs to treat diseases related to GALRI cativity. The polymucleotide or variant is useful in studying expression of the GALRI isogenes in vivo, for in vivo screening and testing of drugs targeted against GALRI protein, and for studying the effect of the
                                                                                                                                                                                                                                                                                                                                                                                            ö
methods may be used to identify candidate drugs which affect the cell cycle and for identification of antifungal drugs. AAF33268 to AAF44064 represent SAGE tags used in the exemplification of the present invention. AAF33262 to AAF33267 represent linkers and PCR primers used in the SAGE method, in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genotyping human galanin receptor gene of an individual for determining haplotype of an individual, involves determining the identity of nucleotide pair at specific polymorphic sites for two copies of the gene.
                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Galanin receptor; GALR1; human; single nucleotide polymorphism; SNP; drug discovery; haplotyping; infectious diarrhoea; growth hormone deficiency; allele-specific oligonucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Galanin receptor gene GALR1 allele-specific oligonucleotide #104.
                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nandabalan K;
                                                                                                                                                                                                                                                                                                               Score 8.4; DB 1; Length 10; Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                  Sequence 10 BP; 0 A; 5 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Denton RR,
                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Choi JY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 18; Page 16; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAS98392 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                           52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-APR-2001; 2001WO-US012306.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14-APR-2000; 2000US-0197838P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                            9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bentivegna SC, Chew A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GCGGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGGCAGCA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-066341/09.
                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200179237-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAS98392;
                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
```

```
variation on the biological activity of GALR1 as well as on the binding affinity of candidate drugs targeting GALR1 for the treatment of infectious diarrhoea and growth hormone insufficiency. AAS98289- AAS98408 represent human GALR1 gene allale-specific oligonuclectides used to detect GALR1 gene polymorphisms as described in the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to a method for haplotyping the cytochrome P450, subfamily IID, polypeptide 6 (CYP2D6) gene (ABG72215, ABG72364) of an individual, and also describes 29 novel polymorphic sites within the human CYP2D6 gene is located on chromosome 22q13.1 and contains 9 exons which encode a 497 amino acid protein (ABB09563). CYP2D6 is a mono-oxygenase involved in the detoxification of many drugs and environmental chemicals. It plays a role in the metabolism of drugs such as antiarrhythmics, adrenoreceptor antagonists and tricyclic antidepressants, and is also involved in the formation of a metabolite linked to the drug-induced lupus syndrome observed with procainamide. Variations in CYP2D6 activity or expression may also influence an individual's susceptibility to environmentally-linked diseases, and it has been demonstrated that CYP2D6 activity may be involved in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; cytochrome P450; subfamily IID polypeptide 6; CYP2D6; enzyme; chromosome 22q13.1; drug metabolism; detoxification; mono-oxygenase; antiarrhythmia; adrenoreceptor antagonist; hypertension; tricyclic antidepressant; procainamide; drug induced lupus syndrome; environmentally linked disease; Parkinsons's disease; haplotyping; genotyping; haplotype; genetic variant; single nucleotide polymorphism; SNP; drug screening; drug discovery; primer extension; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel genetic variants of Cytochrome P450, Subfamily IID, Polypeptide 6 isogenes, useful for improving efficiency and reliability in drug development for treating hypertension, arrhythmias and Parkinson's
                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                             .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human CYP2D6 gene polymorphism detection primer, SEQ ID NO:108.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Denton RR, Nandabalan K;
                                                                                                                                                                                Score 8.4; DB 1; Length 10; Pred. No. 1.7e+02; 0; Mismatches 1; Indels
                                                                                                                                        Sequence 10 BP; 1 A; 3 C; 6 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 17; Page 18; 158pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Choi JY,
                                                                                                                                                                                                                       .
0
                                                                                                                                                                                                                                                                                                                                                                                                     ABQ72321 standard; DNA; 10 BP.
                                                                                                                                                                           52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-NOV-2000; 2000US-0247943P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-NOV-2001; 2001WO-US047396.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                  Local Similarity 90.0
                                                                                                                                                                                                                                                                                                    GGCGAGCGGC 10
                                                                                                                                                                                                                                                            2 GGGGGGGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Α̈́ Ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Anastasio AE, Chew
Petersen N, Rounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-519292/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200238589-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-MAY-2002
                                                                                                 invention
                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 disease
                                                                                                                                                                                                                                                                                                                                                              RESULT 274
                                                                                                                                                                                                                       Matches
8888888888
                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                                                                                                셤
```

CC form of the enzyme tending to have an earlier onset of this condition.

CC (YP220 nucleic acid sequences are useful in studying the expression and function of CYP205, and in expressing CYP206 protein for use in screening drugs for the treatment of CYP205 ensociated diseases (e.g., drugs for the treatment of CYP205 ensociated diseases (e.g., and atnal ventricular arrhythmias, Parkinson's disease, and drug-induced lupus syndrome) or which are metabolised by CYP205.

CC PODD mucleic acids and proteins are also useful in studying the effect of polymorphisms on the biological activity of CYP205. Polymorphisms in the target region may be determined by the use of allele-specific of polymorphism on the biological activity of CYP205. Polymorphisms in the target region may be determined by the use of allele-specific oligonucleotides (ASOS; ABQ72217-ABQ72303) as probes and primers, and by primers comprising sequences ABQ72304-ABQ72304. The method of the invention is useful for haplotyping the companies of the cype of in populations and in individuals, enabling decisions to be made as to whether CYP205 is a likely therapeutic target for a disease of interest, and to control for genetically based bias in the design of drugs that target or are metabolised by CYP206. In addition, transgenic confinals comprishing a human CYP206 gene are useful for studying the expression of CYP206 isogenes in vivo, for in vivo screening and testing the expression of CYP206 isogenes in vivo, for in vivo screening and cesting the caspociated conditions in a biological system. Sequences ABQ72361 represent sequences that are specifically claimed as components or primer are serviced to or metabolisms in the CYP206 gene by primer are analysic or primers or primers and compounds for treating cype or primers or primers are seed to detect polymorphisms in the CYP206 gene by primer are analysic. ö Gaps Human SCYB14 preferred oligonucleotide detection primer SEQ ID NO:30. subfamily B member 14; SCYB14; SNP
polymorphic; platelet aggregation; ö 52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02; ive 0; Mismatches 1; Indels Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other; single nucleotide polymorphism; antiinflammatory; primer; ss. small inducible cytokine BP. ABN88031 standard; DNA; 10 (first entry) 9; Conservative 1 GCCGGTCGCC 10 2 GGCGGGCGC Query Match Best Local Similarity WO200229108-A1. 12-AUG-2002 Homo sapiens. 11-APR-2002. extension ABN88031; Human; RESULT 275 Matches **ABN8803** ઠે 셤

New small inducible cytokine subfamily B (Cys-X-Cys), Member 14 (SCYB14) gene polymorphic variants, for studying the expression and function of SCYB14 and screening candidate drugs for treating disorders involving Sausker EA; Russo DP, (GENA-) GENAISSANCE PHARM INC 04-OCT-2001; 2001WO-US031303 04-OCT-2000; 2000US-0238101P. Choi JY, Kazemi A, WPI; 2002-315864/35.

Claim 17; Page 14; 73pp; English

inflammatory responses.

The present invention describes genetic variants of the human small inducible cytokine subfamily B (Cys-X-Cys), Member 14 (BRAK) (SCYB14) gene. SCYB14 sequences have antiinflammatory activity. The polymorphic coarriants are useful in studying the expression and function of SCYB14, in expressing SCYB14 protein for use in screening for candidate drugs to treat diseases related to SCYB14 activity, in studying the effect of the coarriants on the biological activity of SCYB14, and the binding affinity of candidate drugs targeting SCYB14 for the treatment of disorders involving inflammatory responses. Haplotyping methods from the present invention are useful in validating SCYB14 as a candidate target for treating a specific condition or disease predicted to be associated with SCYB14 activity, or in the design of clinical trials of candidate drugs for treating a specific condition or disease associated with SCYB14 cc activity. Transpenic animals are useful for studying expression of the SCYB14 isogenes in vivo, for in vivo screening and testing of drugs cargeted against SCYB14 protein, and for testing the efficacy of therapeutic agents and compounds for disorders related to platelet . 0 The invention relates to an isolated polynucleotide comprising a sequence selected from a polymorphic variant of calmodulin 1 (CALM1). The polymorphic variant comprises an CALM1 isogene defined by a haplotype selected from haplotypes 1-21 given in the specification. The polymorphisms are useful for studying the biological function of CALM1 as Gaps New calmodulin-1 (CALM-1) isogene polymorphic variants, useful in expressing CALM1 protein for use in screening for candidate drugs to treat diseases related to CALM1 activity such as Alzheimer's disease. preferred oligonucleotide detection primer for the human SCYB14 gene system. The present sequence represents Calmodulin 1; CALM1; human; single nucleotide polymorphism; SNP; haplotyping; SCYA3; Alzheimer's disease; drug screening; calcium-dependent signal transduction; PCR primer; ss. ö 52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02; Koshy B, Stephens JC; 1; Indels Human CALM1 gene allele-specific oligonucleotide #93. Sequence 10 BP; 1 A; 3 C; 6 G; 0 T; 0 U; 0 Other; 0; Mismatches Choi JY, Claim 17; Page 14; 82pp; English. AAS95984 standard; DNA; 10 BP. (GENA-) GENAISSANCE PHARM INC 09-APR-2001; 2001WO-US011509. 12-APR-2000; 2000US-0196340P. aggregation in a biological (first entry) 9; Conservative Bentivegna SC, Chew A, 1 GGCGGGCGAC 10 2 GGCGGGCGC 11 WPI; 2002-049190/06. Best Local Similarity Matches 9; Conserv WO200179218-A2. 26-FEB-2002 25-OCT-2001 AAS95984; Query Match Homo AAS95984/c ò

. 0 The invention relates to an isolated polynucleotide comprising a sequence selected from a polymorphic variant of calmodulin 1 (CALMI). The polymorphic variant comprises an CLMI isogene defined by a haplotype selected from haplotypes 1-21 given in the specification. The polymorphisms are useful for studying the biological function of CALMI as well as in identifying drugs targeting this protein for the treatment of a disorder related to its abnormal expression or function. The polymorphic variants may also be used in screening for compounds targeting CALMI to treat a specific condition or disease predicted to be associated with CALMI activity. Establishing CALMI haplotype or haplotype pair of an individual is useful for improving the efficiency and well as in identifying drugs targeting this protein for the treatment of a disorder related to its abnormal expression or function. The polymorphic variants may also be used in screening for compounds targeting CALM1 to treat a specific condition or disease predicted be associated with CALM1 activity. Establishing CALM1 haplotype or haplotype pair of an individual is useful for improving the efficiency and reliability of several steps in the discovery and development of drugs for treating diseases associated with SCYM3 activity, e.g. Alzheimer's disease and diseases involving defects in calcium-dependent signal transduction. Haplotyping the CALM1 gene in an individual is also useful in the design of clinical trials of candidate drugs for treating a specific condition or disease predicted to be associated with CALM1 activity, AAS55892-AAS56018 represent human CALM1 allele- specific Gaps New calmodulin-1 (CALM-1) isogene polymorphic variants, useful in expressing CALM1 protein for use in screening for candidate drugs to treat diseases related to CALM1 activity such as Alzheimer's disease. SNP; ; Calmodulin 1; CALM1; human; single nucleotide polymorphism; haplotyping; SCYA3; Alzheimer's disease; drug screening; calcium-dependent signal transduction; PCR primer; ss. 52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02; ive 0; Mismatches 1; Indels Stephens JC; Human CALM1 gene allele-specific oligonucleotide #100. oligonucleotides and PCR primers of the invention Sequence 10 BP; 0 A; 7 C; 2 G; 1 T; 0 U; 0 Other; Koshy B, Choi JY, Claim 17; Page 14; 82pp; English. AAS95991 standard; DNA; 10 BP. (GENA-) GENAISSANCE PHARM INC. 09-APR-2001; 2001WO-US011509. 12-APR-2000; 2000US-0196340P. (first entry) 9; Conservative Bentivegna SC, Chew A, 2 GGCGGGCGGC 11 10 GCCGCGAGGC 1 WPI; 2002-049190/06. Local Similarity WO200179218-A2. Homo sapiens. 26-FEB-2002 25-OCT-2001. AAS95991; Query Match Matches AAS9599: ð a

```
1 receptor (TACR1) gene of 10-100 nucleotides comprising a fragment the fragment in the fragment is a polymorphic site or a complement of the fragment. The TACR1 segment is useful for analysing a nucleic acid, by obtaining the nucleic acid from an individual, and determining the base occupying any one of the polymorphic sites in the segment. The nucleic acid is obtained from several individuals, and the base occupying one of the polymorphic sites is determined in each of the individuals, and the presence of a disease phenotype, and each of the individuals for the presence of a disease phenotype, and correlating the presence with the base. The TACR1 segment is useful for diagnosing and treating TACR1 ligand mediated diseases, such as asthma. The TACR1 segment is also useful in forensics, paternity testing, correlating polymorphisms with phenotypic traits, and genetic mapping of phenotypic traits. The TACR1 segment is useful in diagnosing and monitoring of diseases such as cancer, inflammation, heart disease, correlating received as cancer, inflammation, heart disease, correction to diseases of central nervous system, and susceptibility to infection to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a nucleic acid segment from the human neurokinin
reliability of several steps in the discovery and development of drugs for treating diseases associated with SCYA3 activity, e.g. Alzheimer's disease and diseases involving defects in calcium-dependent signal transduction. Haplotyping the CALMI gene in an individual is also useful in the design of clinical trials of candidate drugs for treating a specific condition or disease predicted to be associated with CALMI activity. AAS95892-AASS6018 represent human CALMI allele- specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cytostatic, antiasthmatic, antiinflammatory, cardiant, polymorphic site, human neurockinin 1 receptor; TACR1, disease phenotype; forensics, TACR1 ligand mediated disease; asthma; paternity testing; cancer; inflammation; heart disease; central nervous system; infection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel nucleic acid segment from human neurokinin 1 receptor, including polymorphic sites for diagnosing and treating asthma, and in forensics, paternity testing, and genetic mapping of the traits.
                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human neurokinin 1 receptor gene polymorphic region SEQ ID No 4.
                                                                                                                                                                                                                                                                                     ô
                                                                                                                                                                                                                                    Score 8.4; DB 1; Length 10;
Pred. No. 1.7e+02;
0; Mismatches 1; Indels
                                                                                                                                                   oligonucleotides and PCR primers of the invention
                                                                                                                                                                                               Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Webb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Seymour AB,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 25; 27pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP
                                                                                                                                                                                                                                       52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-MAY-2001; 2001US-0293425P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-MAY-2002; 2002EP-00253662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABT16423 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nelson DL,
                                                                                                                                                                                                              Query Match
Best Local Similarity 90.0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (PFIZ ) PFIZER PROD INC
                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                          11
                                                                                                                                                                                                                                                                                                                                                                GGCGGGAGGC
                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-150228/15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Affourtit JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP1262565-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-MAR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          04-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABT16423;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABT16423
                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
  8888888888888
                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                셤
```

```
The invention relates to a method for identifying a reliable diagnostic, prognostic or staging marker for phenotypic conditions characterised by altered DNA methylation. The method involves Obtaining a set of at least two denomic DNA samples, identifying primary differentially methylated CpG dinucleotide sequence positions, selecting a primary differentially methylated CpG dinucleotide sequence position and confirming the class-distinguishable methylation status of the selected sequence position. The method is useful for identifying a reliable diagnostic, prognostic or staging marker for phenotypic conditions characterised by altered DNA methylation e, g cell proliferative disorders, carders, central nervous system disorders, inflammation, disease of the respiratory system, sexual disorders, lesions, inflammation, inflammation, disease, behavioural problems, psychotic disorders, Hosting, discase, cancer, autism, ulcerative colitis or Huntington's disease. The method is also useful for
                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gastrointestinal tract disease, respiratory system disease; inflammation, sexual malfunction, ulcerative colitis; psychotic disorder; hypertension; cardiovascular disorder; immune disorder; Hodgkin's disease; drug abuse; behavioural problem; metabolic disorder; Huntington's disease; dementia; skin disorder; cancer; lesion; autism; therapy; arbitrarily-primed PCR;
        đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cell proliferative disorder; central nervous system disorder; infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Identifying a reliable diagnostic, prognostic or staging marker for phenotypic conditions characterized by altered DNA methylation, e.g., cancer, comprises obtaining a set of at least two biological samples in each case having genomic DNA.
        ĕ
                                                                                                                                                                                 Gaps
    manufacture
                    the diseases. This polynucleotide ic region of the human neurokinin 1
                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           G6 primer used in arbitrarily-primed PCR (AP-PCR) analysis.
                                                                                                                                    52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                             1; Indels
microorganisms. The TACR1 segment is also useful in the medicament for the treatment of the diseases. This polym
                                                                                               Sequence 10 BP; 2 A; 3 C; 5 G; 0 T; 0 U; 0 Other;
                                      sequence represents a polymorphic regic
receptor (TACR1) gene of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 1; Page 43; 87pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83;
                                                                                                                                                                                                                                                                                                                                                       AAD58332 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-JAN-2003; 2003WO-US003000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-JAN-2002; 2002US-0352944P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schweikhardt
                                                                                                                                                                                                                                                                                                                                                                                                                                    20-NOV-2003 (first entry)
                                                                                                                                                                             9; Conservative
                                                                                                                                                                                                                                          3 GCGGCCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (EPIG-) EPIGENOMICS AG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-618367/58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AP-PCR; primer; ss.
                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003064701-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sledziewski A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                               AAD58332;
                                                                                                                                      Query Match
                                                                                                                                                                         Matches
8886668
                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

ઠે 셤

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pharmaceutical composition for treating ailments associated with impaired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonuclectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or ansal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinome. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; antisense; lung dysfunction; nasal airway dysfunction; antinflammatory steroid; ubiquinone; antinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
treating the above mentioned disorders. The present sequence is a primer used in arbitrarily-primed PCR (AP-PCR) analysis. This sequence is used in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid
                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aguilar D;
                                                                                                                                                                              ;
0
                                                                                                                                 52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02;
                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human adenosine Al receptor antisense fragment no.755.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pabalan J,
                                                                                         Sequence 10 BP; 1 A; 6 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO 10134; 872pp; English.
                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                       ABZ94892 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-APR-2001; 2001US-0286137P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                     Best Local Similarity 90.0
Matches 9, Conservative
                                                                                                                                                                                                                    4 CGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-229219/22.
                                                                                                                                                                                                                                                          10 ceeeceear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ubiquinone
                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nyce JW,
                                                                                                                                                                                                                                                                                                                           RESULT 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ношо
                                                                                                                                                                                                                                                                                                                                                                          ន្តដ្ឋប្រជុន
```

```
The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entitificammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an entiinflammatory steroid in a subject, for reducing levels of, or reducing sensitivity to adenosine, reducing levels of, or reducing sensitivity to adenosine, reducing levels of, ung surfactant in a subject 's tissue, or a treating bronchoconstriction, lung surfactant in a subject's tissue, or a treating bronchoconstriction.
                                                                                                                                                                 ö
Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human, antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antisethmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Katz E, Pabalan J, Aguilar D;
                                                                                                                                                                 .;
0
                                                                                                                      52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human adenosine Al receptor antisense fragment no.809.
                                                                                    Sequence 10 BP; 2 A; 2 C; 6 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure, SEQ ID NO 10188; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                       ABZ94946 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                    9; Conservative
                                                                                                                                                                                                          3 GCGGGCGGCA 12
                                                                                                                                                                                                                                               1 GAGGCGGCA 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-229219/22.
                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                       17-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ubiquinone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW,
Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                ABZ94946;
                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                              RESULT 281
                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                   ABZ94946
                                                                                                                                                                                                                                                                                                                                                                            8 x 3 3 3 3
                                                                                                                                                                                                             ò
                                                                                                                                                                                                                                               셤
```

not

```
ö
Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                            Gaps
                                                                                                                                          ö
                                                                                                   52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                            Human adenosine Al receptor antisense fragment no.735.
                                                                   Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                          ABZ94872 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                 Local Similarity 90.0
                                                                                                                                                                        6 GGCGCCATCG 15
                                                                                                                                                                                                        10
                                                                                                                                                                                                   GGCGGCATGG
                                                                                                                                                                                                                                                                                                                                                              17-0CT-2003
                                                                                                                                                                                                                                                                                                                            ABZ94872;
                                                                                                       Query Match
                                                                                                                                                                                                                                                          RESULT 282
                                                                                                                                       Matches
                                                                                                                                                                                                                                                                          ABZ94872
 ន្តដ្ឋប្បដ្ឋ
                                                                                                                                                                        ò
                                                                                                                                                                                                     셤
```

Human; antisense; lung dysfunction; nasal airway dysfunction; antinflammatory steroid; ubiquinone; antinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.

Sandrasagra A, Ka ,, Shahabuddin S; 23-APR-2002; 2002WO-US013135. 24-APR-2001; 2001US-0286137P. (EPIG-) EPIGENESIS PHARM INC Li Y, Sar Tang L, WO200285308-A2 Homo sapiens. 31-0CT-2002 Nyce JW,

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or WPI; 2003-229219/22. ubiquinone.

Pabalan J, Aguilar D;

Katz E,

· s

Miller

Disclosure; SEQ ID NO 10114; 872pp; English.

first active agent comprising or purintential composition, which has a first active agent comprising or oligonuclectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2.10 nuclectides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antinflammatory steroid and ubiquinone. A composition of the invention has antinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or misspant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antinflammatory steroid in a subject, for reducing or depleting levels of of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. invention relates to a novel pharmaceutical composition, which has

```
ö
      : represented in the printed format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           comprishing objections, and an interview of the comprishing objections, and a comprishing objections, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The objection of a trace polypeptide associated with lung airway or lung expression of a trace polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containners, (b) the objectides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cyrotatric activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallaergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distresses syndrome; allergic chinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention describes a novel composition (a) a first active agent.
                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             oligonucleotide containing less percentage of adenosine, targeted unucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ä
                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aguilar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pharmaceutical composition for treating asthma, has antisense
                                                                                                                         Length 10;
                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human adenosine Al receptor oligonucleotide fragment 735.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pabalan J,
                                                                                 Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                     Score 8.4; DB 1;
Pred. No. 1.7e+02;
Note: The sequence data for this patent is not specification, but was obtained in electronic at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 15; SEQ ID NO 10114; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                  ABD18720 standard; DNA; 10 BP.
                                                                                                                   52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-APR-2002; 2002WO-US013143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-APR-2001; 2001US-0286036P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                               29-JUL-2004 (first entry)
                                                                                                                                                            9; Conservative
                                                                                                                                                                                                  Gecegeceec 11
                                                                                                                                                                                                                                     1 GGAGGCGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-093058/08.
                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200285309-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Miller S,
                                                                                                                                                                                                                                                                                                                                                                          ABD18720;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                               RESULT 283
                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                  ABD18720
    ន្តដូន្ធន
                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                     ద
```

ö inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and to Gaps oligonucleotide containing less percentage of adenosine, targeted t nucleic acids associated with lung airway or lung dysfunction, and ; 0 Aguilar Pharmaceutical composition for treating asthma, has antisense 52.5%; Score 8.4; DB 1; Length 10; llarity 90.0%; Pred. No. 1.7e+02; Conservative 0; Mismatches 1; Indels Human adenosine Al receptor oligonucleotide fragment 755. Pabalan J, Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other; SEQ ID NO 10134; 763pp; English. Sandrasagra A, Katz E, pulmonary transplantation rejection; ds 뗦. 23-APR-2002; 2002WO-US013143. (EPIG-) EPIGENESIS PHARM INC. 24-APR-2001; 2001US-0286036P ABD18740 standard; DNA; 10 (first entry) 11 10 bronchodilating agent WPI; 2003-093058/08. Li Y, Sar Tang L, 2 GGCGGGCGGC 1 GGAGGCCGC Local Similarity WO200285309-A2. sapiens, 9; 29-JUL-2004 31-OCT-2002 Nyce JW, I Miller S, Claim 15; ABD18740; Query Match Best Loca Matches RESULT 284 Ношо ABD18740 g 8

contractant depletion or hyposecretion, when administered to a mammal. The oligomucleotides are derived from a gene encoding or regulating contractant depletion or hyposecretion, when administered to a mammal. The oligomucleotides are derived from a gene encoding or regulating dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery or lung dysfunction also describes a kit, that comprises: (a) a delivery of device, in separate containers, (b) the oligomucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung continuation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies and/or surfactant hypoproduction are associated distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligom corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligomucleotides into products that free adenosine into the system corresponding to the oligomucleotides into products that free adenosine into the system corresponding vector the edge of the oligomucleotides into products that free adenosine into the system corresponding to the oligomucleotides into product that the target that free adenosine the demosine correspond ö Human, antisense, bronchoconstriction, allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic, antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cycostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. or (A) receptors, Gaps Aguilar D; ; Score 8.4; DB 1; Length 10; Pred. No. 1.7e+02; 0; Mismatches 1; Indels Human adenosine Al receptor oligonucleotide fragment 809. Pabalan J, adenosine sensitivity, levels of adenosine Sequence 10 BP; 2 A; 2 C; 6 G; 0 T; 0 U; 0 Other; Katz E, prevent any unwanted effects due to it Sandrasagra A, Ka L, Shahabuddin S; ; BP. 52.5%; 90.0%; 23-APR-2002; 2002WO-US013143. 24-APR-2001; 2001US-0286036P. (EPIG-) EPIGENESIS PHARM INC. ABD18794 standard; DNA; 10 29-JUL-2004 (first entry) 9; Conservative 3 GCGGCCGCA 12 GAGGCCGCA 10 Query Match Best Local Similarity Li Y, Tang WO200285309-A2 Homo sapiens. 31-OCT-2002. Nyce JW, 1 Miller S, ABD18794; RESULT 285 Matches ABD1879 ò g

```
comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiathmatic, and the containers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human; osteopathic; antiarthritic; antirheumatic; chondromedin; marker;
                                                                                                                                                                                                      invention describes a novel composition (a) a first active agent,
                                        Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted to nucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human chondromedin protein related oligonucleotide #24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 1.7e
0; Mismatches
                                                                                                                                                      Claim 15; SEQ ID NO 10188; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADO26312 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-OCT-2003; 2003WO-JP013919.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-OCT-2002; 2002JP-00315573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6 GGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                             bronchodilating agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
Les 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2004039974-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AD026312;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 286
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B X L X B X B X S X & X E X L X Y X D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઠે
```

```
The present invention relates to mature and precursor chondromedin protein sequences. Also provided are the coding sequences. The sequences are useful for preventing and/or treating bone and articular diseases such as fracture, chondrodystrophy, osteodystrophy, osteoporosis, osteoarthritis, rheumatoid arthritis, synovitis and metabolic arthritis, and as markers in the diagnosis of the above conditions. The present sequence is a polynucleotide sequence shown in the exemplification of the
                                                                                                                       Novel chondromedin protein or salts, useful as diagnostic markers for osteitis, arthritis and for screening compounds useful in treating bone and articular diseases such as fracture, osteoarthritis, rheumatoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Identifying agents that alter biological activity of a polypeptide encoded by a polynucleotide involved in hypoxia-related tumorigenesis comprises contacting an agent with a target cell and monitoring activity
                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention comprises a method of screening for candidate agents capable of altering the biological activity of a protein encoded by
                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                          52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     screening; hypoxia-related tumourigenesis;
hypoxia-induced gene regulation; tumour; SAGE tag; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hypoxia-related tumourigenesis-related SAGE tag #1539
                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 0 A; 4 C; 6 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                    Example 3; Page 75; 107pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 86; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADU19748 standard; DNA; 10 BP.
28-NOV-2002; 2002JP-00345601.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-APR-2004; 2004WO-US011087.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-APR-2003; 2003US-0461712P
                                (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-JAN-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                       9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGGCGC 11
                                                              Inazuka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GENZ ) GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2004-758333/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  expressed product
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGGGGGGGG
                                                                                           WPI; 2004-390322/36
                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2004092198-A2
                                                              Watanabe T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-OCT-2004.
                                                                                                                                                                       arthritis
                                                                                                                                                                                                                                                                                                                                             invention
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADU19748;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nacht M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 287
                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADU19748/
 ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <del>a</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
```

```
ö
nucleotide involved in hypoxia-related tumourigenesis. The method of the invention involves: contacting a test agent with a target cell expressing the nucleotide, and monitoring the activity of the expressed protein product; if the test agent modifies the activity of the expressed protein then this is a candidate agent. The method of the invention is useful for modifying hypoxia-induced gene regulation and for diagnosing, prognosing or treating tumours. The present DNA sequence represents a SAGE tag that was used in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention comprises a method of screening for candidate agents capable of altering the biological activity of a protein encoded by a nucleotide involved in hypoxia-related tumourigenesis. The method of the invention involves: contacting a test agent with a target cell expressing the nucleotide, and monitoring the activity of the expressed protein product; if the test agent modifies the activity of the expressed protein then this is a candidate agent. The method of the invention is useful for modifying hypoxia-induced gene regulation and for diagnosing, prognosing or treating tumours. The present DNA sequence represents a SAGE tag that was used in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Identifying agents that alter biological activity of a polypeptide encoded by a polypuclectide involved in hypoxia-related tumorigenesis comprises contacting an agent with a target cell and monitoring activity of expressed product.
                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                           Query Match 52.5%; Score 8.4; DB 1; Length 10; Best Local Similarity 90.0%; Pred. No. 1.7e+02; Matches 9; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypoxia-related tumourigenesis-related SAGE tag #251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     screening; hypoxia-related tumourigenesis;
hypoxia-induced gene regulation; tumour; SAGE tag;
                                                                                                                                                                                       Sequence 10 BP; 0 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 0 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Page 61; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADU18460 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-APR-2003; 2003US-0461712P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-APR-2004; 2004WO-US011087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                             2 GGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                   н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GENZ ) GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-758333/74.
                                                                                                                                                                                                                                                                                                                                                   10 GGCGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2004092198-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13-JAN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADU18460;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nacht M;
                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 288
                                                                                                                                                                                                                                                                                                                                                                                                                                      ADU18460/
                                                                                                                                                                                                                                                                                                                                                                                                                                                           888888888888
                                                                                                                                                                                                                                                                                                                                                 셤
```

```
The invention comprises a method of screening for candidate agents capable of altering the biological activity of a protein encoded by a nucleotide involved in hypoxia-related tumourigenesis. The method of the invention involves: contacting a test agent with a target cell expressing the nucleotide, and monitoring the activity of the expressed protein product; if the test agent modifies the activity of the expressed protein then this is a candidate agent. The method of the invention is useful for modifying hypoxia-induced gene regulation and for diagnosing, prognosing or treating tumours. The present DNA sequence represents a SAGE tag that was used in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Identifying agents that alter biological activity of a polypeptide encoded by a polynucleotide involved in hypoxia-related tumorigenesis comprises contacting an agent with a target cell and monitoring activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 8.4; DB 1; Length 10;
Pred. No. 1.7e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                        Hypoxia-related tumourigenesis-related SAGE tag #2116.
                                                                                                                                                                                                                                     фВ.
                                                                                                                                                                                                                    screening; hypoxia-related tumourigenesis;
hypoxia-induced gene regulation; tumour; SAGE tag;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seguence 10 BP; 0 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 100; 100pp; English.
                                                                                                     BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВР.
                                                                                                                                                                                                                                                                                                                                                       09-APR-2004; 2004WO-US011087.
                                                                                                                                                                                                                                                                                                                                                                                    09-APR-2003; 2003US-0461712P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52.5%;
                                                                                                     ADU20325 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADU78419 standard; DNA; 10
                                                                                                                                                           13-JAN-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 90.0
es 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rice oligonucleotide #33.
GCCGCCCCC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCGGCCGC 11
                             Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 GGCGGGAGGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                  (GENZ ) GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of expressed product
                           10 GCCGGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2004-758333/74.
                                                                                                                                                                                                                                                                                              WO2004092198-A2
                                                                                                                                                                                                                                                                 Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-FEB-2005
                                                                                                                                                                                                                                                                                                                           28-OCT-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADU78419;
                                                                                                                                 ADU20325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                               Nacht M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                      RESULT 28
ADU20325/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADU78419
                                                                                                     à
                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

ö

Gaps

; 0

Similarity 90.0%; Pred. No. 1.7e+02; 9; Conservative 0; Mismatches 1; Indels

Query Match Best Local Similarity Matches 9; Conservat

```
WO2004099445-A1
  Oryza sativa,
       18-NOV-2004
   Synthetic.
              (IWAT-)
                    Kahl G,
               (KAHL/)
(WINT/)
```

The invention relates to the use of a type III restriction enzyme to isolate from cDNA of an expressed gene, a tag comprising more than 25 nucleotides and capable of identifying the expressed gene, where the 3 or carzyme and the 5' end of the tag is defined by the cleavage site of the type III restriction carzyme that is closest to the 3' end of the cDNA of the expressed gene, where tha 1s closest to the 3' end of the cDNA of the expressed gene. The invention also relates to a ditag-oligonuclectide comprising two tags each of which is derived from a different expressed gene, where each tag comprises more than 25 nucleotides and is capable of dentifying an expressed gene, where tha 1s nucleotides and is capable of a cleavage site of the type III restriction enzyme and the 5' end of the cDNA of the expressed gene to the 3' end of the cDNA of the expressed gene to the 3' end of the cDNA of the expressed gene comprising synthesizing a CDNA of the expressed gene at the cDNA of the expressed gene method comprising synthesizing a CDNA of the expression analysis method comprising synthesizing a CDNA pool from miNNA of expressed gene expression analysis cusing a primer comprising or CDNA of the cDNA pool with a recognition enzyme, followed by digestion of the cDNA pool, and ligating the fragments with the type of III restriction enzyme, digesting the recognition sequence of the cDNA pool, and ligating the resulting fragment comprising to linker-A to the resulting fragment comprising to linker-A to the resulting tragment comprising the certification enzyme, digesting the ligated fragments with the other certification enzyme, and ligating the resulting fragment comprising the linker-B after performing a diega-oligonucleotide a polymucleotide, and yazing the expressed gene, lidatifying the expressed gene, lidatifying the expressed gene, lidatifying the expressed gene based on the number of tags corresponding to the expressed gene based on the number of tags corresponding to the left of an expressed gene based on the number polynuclectide sequence and quantifying the expression level of an expressed gene based on the number of tags corresponding to the expressed gene included in the polynucleotide. The isolated tag allows accurate profiling This sequence represents a rice oligonucleotide used in the quantitative gene expression analysis and rapid gene expression in any organism for which no expressed sequence tag (EST) databa available. This sequence represents a rice oligonucleotide used

Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;

52.5%; Score 8.4; DB 1; Length 10; 90.0%; Pred. No. 1.7e+02;

Best Local Similarity

Query Match

Use of type III restriction enzyme to isolate from cDNA of an expressed gene, a tag comprising more than 25 nucleotides and capable of identifying the expressed gene. IWATE PREFECTURAL GOVERNMENT. Example 1; Page 21; 53pp; English. Winter P, Krueger D, 09-MAY-2003; 2003WO-JP005840. 09-MAY-2003; 2003WO-JP005840 method of the invention. WPI; 2004-821686/81. (KAHL/) KAHL G. (WINT/) WINTER P. (KRUE/) KRUEGER D. (REIC/) REICH S. Gene expression;

Terauchi

Matsumura H,

Reich S,

```
The invention relates to a novel method for detecting and distinguishing between, or among, colorectal cell proliferative disorders. The method involves contacting genomic DNA of a biological sample obtained from the subject with one or more reagent (s), or a series of reagents that distinguishes between methylated and non-methylated CpG dinucleotides within a target sequence of the genomic DNA. The invention further comprises: a nucleic acid comprising a sequence of 18 or more contiguous nucleotides of a treated genomic DNA sequence chosen from any one of 284 provided in the specification, and their complementary sequences, where the contiguous sequence has one or more CpG. TpA, or CpA dinucleotide, and the treatment is suitable to convert one or more of the unmethylated cytosine base (s) of the genomic DNA sequence initially to uracil or another base that is detectably dissimilar to cytosine in terms of hybridization; an oligomer or peptide nucleotides that is complementary to or the comprising 9 or more contiguous nucleotides that is complementary to or contiguous nucleotides that is complementary to or contiguous nucleotides that is conditions to one of the contiguous nucleotides that is conditions to one of
          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the 284 DNA sequences and their complementary sequences provided in the source document, which is treated; a set of oligomers comprising two or more of the oligomer of PNA-oligomer; an array of oligomers; and a kit for carrying out the above methods. The method and its novel compositions have cytostatic activity. The polynucleotide sequence may be used in gene therapy. The above methods are useful for detecting and distinguishing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Detecting and distinguishing colorectal cell proliferative disorders by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       colorectal tumor; CpG methylation detection; cytostatic; gene therapy; proliferative disorder; carcinoma; PCR; primer; 88.
          Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contacting genomic DNA of biological sample with reagent that distinguishes methylated and non-methylated CpG dinucleotides within
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tonnes-Priddy L;
          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human genomic DNA fragment arbitrarily-primed PCR primer, G6.
       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Day RW,
          ;
   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Thomas J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; SEQ ID NO 366; 23pp; English.
   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          target sequence of genomic DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sledziewski A,
                                                                                                                                                                                                                                                                                                       ADW10561 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-JUN-2003; 2003US-00602494.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-JUN-2003; 2003US-00602494
                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ij
                                                                                                                                  10
                                                                  3 GCGGCCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOFTON-DAY C.
SLEDZIEWSKI A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DAY R W.
TONNES-PRIDDY
                                                                                                                                     GGGGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2005-089566/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THOMAS J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TONN/) TONNES-PR
(CARD/) CARDON K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US2004265833-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lofton-Day C,
Cardon K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                     24-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-DEC-2004.
                                                                                                                                                                                                                                                                                                                                                                      ADW10561;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LOFT/)
(SLED/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (DAYR/)
                                                                                                                                                                                                                                    RESULT 291
Matches
                                                                                                                                                                                                                                                                       ADW10561
                                                                  ઠે
                                                                                                                              셤
```

ö colorectal carcinoma, colon adenomas and colon polyps, in a biological sample, such as histological slides, biopsies, paraffin embedded tissue, bodily fluids, stool, blood, serum, plasma and their combinations. The oligomer array is useful as a probe for detecting one or more of the cytosine methylation state, or single nucleotide polymorphisms within the genomic DNA or their complementary sequences. The polymorleotides of the invention are useful for classifying, distinguishing between, or among, diagnosing or determining the predisposition for colorectal cell proliferative disorders, or for the therapy of colorectal cell proliferative disorders. This polymorleotide sequence represents a primer Detecting and/or differentiating prostate cell proliferative disorders in a subject by contacting genomic with reagent(s) that distinguishes between methylated and non-methylated CpG dinucleotides in target nucleic The invention describes a method of detecting and/or differentiating between prostate cell proliferative disorders in a subject comprising contacting genomic DNA isolated from a biological sample with at least one reagent or series of reagents that distinguishes between methylated and non-methylated CpG dinuclectides within one or a combination of trarget nucleic acids e.g. HISTONE H4. Also described are: a treated nucleic acid derived from SEQ ID NO: 1-59, 1017-1028, 1116, 1171, where the treatment converts at leas one unmethylated cytosine base of the genomic DNA sequence to uracil or another base that is detectable or among, colorectal cell proliferative disorders chosen from Gaps cell proliferation; hyperproliferation; cytostatic; Dekker S; ö Score 8.4; DB 1; Length 10; Pred. No. 1.7e+02; 0; Mismatches 1; Indels Cottrell S, Distler J, Morotti A, Yamamura S, Sequence 10 BP; 1 A; 6 C; 2 G; 1 T; 0 U; 0 Other; Prostate cancer gene PCR primer SEQ ID NO 938. used in the exemplification of the invention. Example 1; SEQ ID NO 938; 164pp; English. AEA52335 standard; DNA; 10 BP. 10-FEB-2004; 2004EP-00090040. 10-MAY-2004; 2004EP-00090187. 21-JUL-2004; 2004EP-00090292. 52.5%; 01-DEC-2003; 2003EP-00090414. 01-DEC-2004; 2004WO-US040289 (first entry) gene expression; cell prol neoplasm; PCR; primer; ss. Ouery Match
Best Local Similarity 90...
Best Son 9; Conservative (EPIG-) EPIGENOMICS AG. 4 CGGCGGCAT 13 10 CGGCCGGAT 1 WPI; 2005-425434/43. Devos T; WO2005054517-A2. Homo sapiens 25-AUG-2005 16-JUN-2005 Day KJ, (Ocamp Y, AEA52335; acids. RESULT 292 **AEA**52335, 셤 ઠ

```
comprising at lest 16 contiguous nucleotides of a treated genomic DNA sequence selected from SEQ ID NO: 60-295, 1029-1076, 1177-1175.

Cand sequence selected from SEQ ID NO: 60-295, 1029-1076, 1117-1170, 1172-1175 and sequence scomplementary to them, an oligomer comprising a sequence of at least 9 contiguous nucleotides that is complementary to, or hybridizes under moderately stringent or stringent conditions to a treated genomic DNA sequence above; a set of oligomers comprising at least two oligomer comprising at least two oligomers comprising at least of oligomers comprising at least of subject comprising at least one of a bisulfite reagent, or a methylation-sensitive restriction enzyme, and at least one nucleic acid molecule or peptide nucleic acid molecule comprising a contiguous sequence at least 9 culeotides that is complementary to, or hybridizes under moderately stringent or stringent conditions to a sequence selected from SEQ ID NO: 60-295, 1029-1076, 1117-1120, 1172-1175 and their complements. The method, nucleic acid, oligomer, set of oligomucleotide, and kit are useful for detecting and/or differentiating between or among cell proliferative disorders. This sequence represents a primer used to analyze methylation status of genes encoding a prostate cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This is the sequence of bases 910-920 of pertussis toxin S1 subunit gene after the primer of AAN90192 has been used to substitute G1y 99 with G1u see also AAN90188-91, and AAN90194-207. (Updated on 31-0CT-2002 to add missing OS field.) (Updated on 25-MAR-2003 to correct PA field.) (Updated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Modified pertussis toxin polypeptide(s) - having aminoacid substitution in sl region for prepn. of anti:pertussis vaccine of reduced toxicity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 8.4; DB 1; Length 10; Pred. No. 1.7e+02; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Portion of substituted pertussis toxin S1 subunit gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Primer; mutant 25; pertussis toxin S1 subunit gene.
                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 10 BP; 1 A; 6 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (ISTS ) IST SIEROTERAPEUTICO & VACCINOGENO. (SCIQ ) SCIPER SA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bartoloni A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 4; 15pp; English.
                                                                                                                                                                                                                                                                                                                                                                       proliferation associated protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                           52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87IT-00022481.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88EP-00117742.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAN90193 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 90.v.
Pest Joy 91 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 CGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pizza M, Rappuloi R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bordetella pertussis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 CGGGCGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1989-193915/27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-OCT-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-NOV-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUL-1989.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-2003
31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EP322533-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAN90193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAN90193/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           $$$$$$$$$$$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ਨੇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ద
```

```
This sequence represents an adapter primer oligonucleotide. It was used to isolate CAG repeat containing sequences from the human genome to test the method of the invention. The method is for analysing nucleic acids in a sample, and comprises: (a) providing a sample containing nucleic acid, a first oligonucleotide primer comprising a CAG repeat, a second coligonucleotide primer comprising a CAG repeat and a polymerase and PCR reagents; (b) preparing said mucleic acid so that it is amplifiable; (c) amplifying the nucleic acid with the first and second primers; and (d) detecting the amplified product. The method is used to distinguish compression of genes in two or more biological samples, e.g. body fluids, cells, solid tisgue or solid and liquid foods. It can be used in medical diagnostics, e.g. to differentiate between normal and diseased tissue or to assess the variation within monozygotic twin pairs. The method allows the isolation and analysis of genome subsets containing CAG repeats which are known to be important in a number of neurological in which nonly fragments which contain a target repeat are efficiently amplified. This allows accurate identification of differentially amplified. This allows accurate identification of differentially amplified. This allows cell types. Genome complexity is reduced by the new method which targets genomic subsets containing CAG repeats
                                                                                                                                            ö
  on 25-MAR-2003 to correct PI field.) (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAG repeat; human; genome analysis; adapter primer; medical diagnostic; nucleic acid analysis; variation assessment; neurological disease; Huntington's chorea; PCR suppression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of
                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Analysing nucleic acid samples - using amplification primers which contain CAG or CTG tri:nucleotide repeats for differential display
                                                                                                                                            ö
                                                                                             52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 1.9e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                   Adapter primer oligonucleotide #2 for CAG repeat analysis.
                                                         Sequence 11 BP; 3 A; 4 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11 BP; 1 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example; Page 31; 44pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             samples from different sources.
                                                                                                                                                                                                                                                                                                               AAV68363 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-US008616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-0045078P.
                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                        Conservative
                                                                                                                                                                           7 GCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1998-594983/50.
                                                                                                                                                                                                             11 GCGCCTTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYBO-) UNIV BOSTON
                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                              10-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9849345-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                      AAV68363;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smith CL;
                                                                                                 Query Match
                                                                                                                                                                                                                                                                                             AAV68363/c
ID AAV683
                                                                                                                      Best Loc
Matches
SXXX
                                                                                                                                                                                                               셤
                                                                                                                                                                           8
```

```
Sequences AAV46501-V47446 are anti-sense oligonuclectides that target the human adenosine A1 receptor, the design of which required the secondary contracture of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonuclectides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their containing either are created they can be used to target their containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-containing cities and product to decrease. The containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-containing cities associated with bronchoconstriction and/or lung confitions associated with bronchoconstriction and/or lung confitions associated with bronchoconstriction and/or lung confitions are confitions associated with bronchoconstriction and/or lung confitions associated with bronchoconstriction and/or lung confitions are confitions associated with bronchoconstriction and/or lung confit and confit an
                                                           ö
                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.

    .11
/*tag= a
/note= "contains phosphorothioate internucleotide

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Treating respiratory disease with antisense sequences directed adenosine or bradykinin receptors - with localised delivery to trespiratory system, suitable for long term treatment of asthma, respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                            Antisense oligonucleotide 714, targeting adenosine Al receptor.
                                                           ö
          Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 8.4; DB 1; Length 11;
Pred. No. 1.9e+02;
     Score 8.4; DB 1; Length 11
Pred. No. 1.9e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                              AAV47214 standard; DNA; 11 BP
52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linkages"
                              Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                       1 056056666 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                           10-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                             AAV47214;
       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nyce JW;
                                                                                                                                                                                                                                RESULT 295
                                                                                                                                                                                                                                                       AAV47214
                                                                                                       ઠે
                                                                                                                                                  유
```

```
ò
                    셤
 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                inflammation in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult
 Gaps
                                                                                                                                                                                  Secondary structure, mRNA, phosphorothioate backbone; G-protein, bronchoconstriction, lung inflammation, asthma, pulmonary disease, allergy, emphysema, cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                      /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
 ö
                                                                                                                                                                 Antisense oligonucleotide 809, targeting adenosine Al receptor.
 Indels
 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 11 BP; 1 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         respiratory distress syndrome etc.
 ö
                                                                                                ВР.
                                                                                                                                                                                                                                                                                                                                                                                                  96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                            97WO-US022017
                                                                                               AAV47309 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                        (UYEC-) UNIV EAST CAROLINA
                                                                                                                                          10-NOV-1998 (first entry)
 9; Conservative
                     7
                                          1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1998-322464/28.
                    2 GGCGGGCGGC
                                          2 GGAGGGCGGC
                                                                                                                                                                                                                                                                 Key
modified_base
                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                  WO9823294-A1.
                                                                                                                                                                                                                                                                                                                                                                             26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                  26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                        04-JUN-1998
                                                                                                                                                                                                                                 Synthetic
                                                                                                                     AAV47309;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce JW;
                                                                           RESULT 296
 Matches
                                                                                     ò
                                         셤
```

```
The present invention describes Wnt-1 induced secreted polypeptides, WISP-2 and WISP-1, 2 and 3. The novel WISP polypeptides, designated WISP-1, WISP-2 and WISP-3 have homology to connective tissue growth factor (CTGF). Products from the present invention can be used to treat WISP-related disorders such as breast, ovarian, and colon cancer or melanoma. The products can also be used to treat colon cancer or melanoma in the product or glandular, macrophagal, epithelial, stromal, and blastcockers, bone-related disorders und cancer such as osteoporosis, trauma such as burns, incisions, and cisorders connective tissue disorders, catabolic states, testicular callated disorders, and inflammatory, angiogenic and immunologic disorders including arteriosolerosis. The products can also be used for detection can diagnosis especially of individuals with neoplastic cell growth or proliferation. The products can be used in the production of transgenic or knock-out animals. Antibodies can be used to induce death in WISP-1, 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WNT-1 induced secreted protein; WISP-1; WISP-2; WISP-3; CTGF; tumour; connective tissue growth factor; cancer; melanoma; arteriosciarosis; leukaemia, lymphoid malignancy; haemetopiosis-related disorder; tissue-growth disorder; skin disorder; desmoplasia; fibrotic lesion; kidney disorder; bone-related disorder; osteoporosis; trauma; burn; connective tissue disorder; catabolic state; inflammation; testicular-related disorder; angiogenesis; immunological disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New isolated Wnt-1 induced secreted polypeptides, WISP-1, 2 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gurney AL, Hillan K, Lawrence DA;
toy MA, Goddard A, Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 8.4; DB 1; Length 11; Pred. No. 1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 11 BP; 1 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Page 201; 284pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Roy MA,
                                                                                                                                                                                                                                            BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-0063704P.
98US-0073612P.
98US-0081695P.
                                                                                                                                                                                                                                                                                                                                                                                                                                          primer SEQ ID NO:44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98WO-US022991
                                                                                                                                                                                                                                         AAX76507 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                             06-AUG-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or 3 overexpressing cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity 90.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DA, Cohen RL,
J, Pennica D,
GCCGCCATCG 15
                                       1 096066666 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-337420/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9921998-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-MAY-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Levine AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                         AAX76507;
                                                                                                                                                                                                                                                                                                                                                                                                                                              WISP PCR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Botstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
```

ö

Gaps

ö

Query Match 52.5%; Score 8.4; DB 1; Length 11; Best Local Similarity 90.0%; Pred. No. 1.9e+02; Matches 9; Conservative 0; Mismatches 1; Indels

```
Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                             Human adenosine Al receptor antisense oligonucleotide fragment.
                                                        AAX53686 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                           98WO-US019419
                                                                                                                                                                                                                                                                                                             97US-0059160P
98US-00093972
                                                                                           05-JUL-1999 (first entry)
prostate cancer; ss
                                                                                                                                                                                                                                                       WO9913886-A1
                                                                                                                                                                                                                                                                                           17-SEP-1998;
                                                                                                                                                                                                                                                                                                             17-SEP-1997;
09-JUN-1998;
                                                                                                                                                                                                                                                                        25-MAR-1999
                                                                                                                                                                                                                                     Synthetic.
                                                                         AAX53686;
          셤
```

New antisense oligonucleotides used in treatment of, e.g. pulmonary (UYEC-) UNIV EAST CAROLINA WPI; 1999-229400/19. Nyce JW;

Disclosure; Page 40; 120pp; English. vasoconstriction

The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genemic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense cligonucleotides may be derived from sequences AAX5572-74. These multiple target oligonucleotides may be derived from sequences AAX5572-74. These multiple target oligonucleotides are those associated with impaired respiration and inflammation, including lung diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, allergic rhinitis, acute asthma, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, coll stress syndrome, pain, cystic fibrosis, pulmonary hypertension, clastress syndrome, pain, cystic fibrosis, pulmonary hypertension, coll stress syndrome, pain, experience and charcers such as leukemias implement of the sast cancer, lung cancer, pancreatic cancer, colon cancer, breast cancer, lung cancer, pancreatic cancer, respiration and processized in the lung including breast and processized or have metastasized to the lung including breast and processized or have metastasized or her lung as all the partic metastasized as a second and access and processized or have metastasized as the lung as all the partic metastasized as a second and access and to the lungs, including breast and prostate cancer

```
Sequence 11 BP; 1 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
```

```
ö
                                 0; Gaps
Score 8.4; DB 1; Length 11; Pred. No. 1.9e+02; 0; Mismatches 1; Indels
 h 52.5%;
Similarity 90.0%;
9; Conservative
Query Match
Best Local Similarity
Matches 9; Conserv
```

52.5%; Score 8.4; DB 1; Length 11;

Query Match

Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;

```
The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and
con-coding regions of RNAs corresponding to target genes, ene initiation
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons, genomic flanking regions and all as segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures unitiens associated with one or more diseases
conditions or mixtures unitiens are those enditiens are those
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, allergic rhinitis,
caute asthma, allergies, asthma, impeded respiration, respiratory
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
cutte asthma, allergies, asthma, impeded respiration,
cutte asthma, bacasc cancer, lung cancer, pancreatic cancer,
colon cancer, bacast cancer, lung cancer, pancreatic cancer,
colon cancer, bacast cancer, lung cancer, pancreatic cancer,
choncaclular carcinoma, kidney cancer, melanoma, hepatic metastassized
colon cancer, bacast cancer, uniques, and prostate cancer
cot the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                        Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                               Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 38; 120pp; English.
                                                                                                                                                AAX53591 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-0059160P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-00093972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                        05-JUL-1999 (first entry)
6 GCCGCCATCG 15
                                       1 GCCGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1999-229400/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-SEP-1997;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                              AAX53591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nyce JW;
                                                                                                       RESULT 299
                                                                                                                                AAX5359
                                       8
                                                                                                                                                                       8
```

```
The present invention describes a new composition composition conjugates and an artisense oligomucleotide (NN) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or antiasthmation. The ON can have antiinflammatory, antiallergic, and/or antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including breat and prostate cancer. The reduction of the adenosine content of the ONS reduces side effects. The A-containing ONS break down with the concernation of inflammation. AAA13112 to AAA31312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 cequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to AAA3392) are specifically claimed ONS from the present invention NB. Sequences given in the disclosure of the present invention to match
                        ö
                                                                                                                                                                                                                                                                                                                                                                                         Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergy; disease; bronchoconstriction; inhibitor; antinflammatory; antiallergic, antiashmatic; cytoostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes a new composition comprising
                      Indels
                                                                                                                                                                                                                                                                                                                                                   Low adenosine antisense oligonucleotide SEQ ID NO:818.
  Pred. No. 1.9e+02;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 18; Page 368; 1343pp; English.
                                                                                                                                                                                                                   AAA33129 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US017712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0095212P
    90.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                        (first entry)
                        9; Conservative
                                                                 1
                                                                                                         GGAGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-205971/18.
                                                                 2 GGCGGGCGGC
Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-AUG-1999;
                                                                                                                                                                                                                                                                                                        28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-FEB-2000.
                                                                                                                                                                                                                                                           AAA33129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cancers.
    Best Local
                                                                                                                                                                        RESULT 300
                    Matches
                                                                                                                                                                                               AAA33129
                                                                                                                                                                                                                                         q
                                                                 ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes a new composition comprising an antisense oligonuclectide (ON) with low adenosine (up to 154), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergie, antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating eg. ischaemic conditions, pulmonary vasconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cyetic fibrosis, pulmonary hypertension, emphysema, chronic obstructive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pulmonary disease (COPE), and cancers such as leukaemias, lymphomas, carcinomary disease (COPE), and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the
up with their corresponding SEQ ID NO: sequences given in the sequence listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphome; carcinoma; metastasis; ss.
                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; adenosine receptor; low adenosine antisense oligonucleotide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                ;
                                                                                                     Score 8.4; DB 1; Length 11; Pred. No. 1.9e+02;
                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Low adenosine antisense oligonucleotide SEQ ID NO:723
                                                               Sequence 11 BP; 1 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 18; Page 357; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                  AAA33034 standard; DNA; 11 BP.
                                                                                                   52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UYEC-) UNIV EAST CAROLINA
                                                                                                                                                  9, Conservative
                                                                                                                                                                                        6 GGCGGCATCG 15
                                                                                                                                                                                                                              GGCGCCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-205971/18.
                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                  28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                          AAA33034;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cancers
                                                                                                                                                  Matches
      SXXX
                                                                                                                                                                                        ò
                                                                                                                                                                                                                            셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardipoulmonary and/or renal damage and/or failure.
(I) is an adenosine Aza receptor agonist (Ia), or an oligonucleotide (Ib), containing less than 15% adenosine (A), that is antisense to target genes or corresponding RNA, to genomic falanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine Al, AZa, AZb or A3 receptors, and has Al, AZb or A3 agonist activity or AZa antagonist activity or Aza antagonist activity or Aza antagonist activity or Aza antagonist activity at this receptor). (I) may be a mixture of (Ia) and optionally also contains one or more surfactants. The
nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 18 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32322 to AAA3392) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine As receptor; adenosine As receptor; adenosine As receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; enguraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:677.
                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                 Score 8.4; DB 1; Length 11; Pred. No. 1.9e+02;
                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                           Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 17; Page 34; 252pp; English.
                                                                                                                                                                                                                                                      .,
                                                                                                                                                                                                                                                                                                                                                                                                                            AAA03393 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0088501P.
98US-00033972.
98US-0088657P.
                                                                                                                                                                                                             52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                      9; Conservative
                                                                                                                                                                                                                                                                                            11
                                                                                                                                                                                                                                                                                                                              2 GGAGGGCGC 11
                                                                                                                                                                                                                                                                                        2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-116433/10.
                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAA03393;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW,
                                                                                                                                      listing
                                                                                                                                                                                                                                                                                                                                                                                       RESULT 302
                                                                                                                                                                                                                                                                                                                                                                                                             AAA03393
   888888888888
                                                                                                                                                                                                                                                                                          ઠે
                                                                                                                                                                                                                                                                                                                              g
```

```
ő
            receptor-mediated cardiac, process, can always and treated administration of drugs or imaging agents, e.g. adenosine for treating administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardias); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02719, AAA02721 and AAA02723 to oligonucleotides for use in the composition of the present invention. AAA02718, AAA02718, the present invention. AAA02718 and AAA03718 represent entitle and AAA03718 represent invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.
(I) is an adenosine Aza receptor agonist (Ia), or an oligonucleotide (Ib), containing less than 15% adenosine (A), that is antisense to target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             adenosine A2a receptor; adenosine Ab receptor; adenosine A receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:772.
 compositions are used to prevent, alleviate and/or treat adenosine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; adenosine Al receptor; antisense oligonucleotide; hypoxia;
                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                        Score 8.4; DB 1; Length 11; Pred. No. 1.9e+02;
                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                                                                                                                                                                                                                   Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 17; Page 35; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         踞.
                                                                                                                                                                                                                                                                                                        52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0088501P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0088657P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA03488 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                             9; Conservative
                                                                                                                                                                                                                                                                                                                                                                            11
                                                                                                                                                                                                                                                                                                                                                                                                              7
                                                                                                                                                                                                                                                                                                                                                                            2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                2 GGAGGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW, Hill JL;
                                                                                                                                                                                                                                  present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA03488;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         renal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 303
                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAA03488
ID AAA0
$$$$$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

Claim 14; Page 117; 1592pp; English.

genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all cast or segments of mRNA encoding the adenosine AI, A22, A2D or A3 receptors, and has A1, A2D or A3 agonist activity or A2a antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and (Ib), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive (e.g. associated with sepsis); allergic rhinitis; chronic obstructive of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02719, AAA02721 and AAA02723 to AAA03715 represent specifically claimed phosphorothicate antisense oligonucleotides for use in the composition of the present invention. AAA02718, AAA02718, AAA02722 and AAA03716 to AAA03720 represent of the present of the phosphorothicate oligonucleotides used in the exemplification of the ö Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; Gaps ö 52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 1.9e+02; Human adenosine Al receptor polynucleotide fragment #723. 1; Indels Sequence 11 BP; 1 A; 3 C; 6 G; 1 T; 0 U; 0 Other; 0; Mismatches AAF19156 standard; DNA; 11 BP. 24-MAR-2000; 2000WO-US008020 99US-0127958P EAST CAROLINA. 14-MAR-2001 (first entry) 9; Conservative 1 GGCGGCATGG 10 6 GGCGGCATCG 15 WPI; 2000-679539/66. Best Local Similarity present invention . ₹ WO200062736-A2 Homo sapiens. (UYEC-) UNIV 06-APR-1999; (NYCE/) NYCE 26-OCT-2000 cancer; ss. AAF19156; Query Match Nyce JW; RESULT 304 Matches 셤 δ

Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.

```
The present live and compositions (1) comprising them. In the antisense oligonucleotides and compositions (1) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (1) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antisathmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (1) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and mallagancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction which are associated with a glease or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human; airway disorder; bronchoconstriction; lung inflammation; human; airway disorder; bronchoconstriction; lung inflammation; broundedilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                             present invention describes low adenosine (A) content antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 1.9e+02; cive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor polynucleotide fragment #818.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF19251 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GGCGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-OCT-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF19251;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF1925.
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

Nyce JW

```
The invention relates to the novel human foetal liver proteins flas53 (AAB2944) and flas65 (L variant (AAB2945) and S variant (AAB2946), and to nucleic acids encoding them (AAC3860-C63862). The invention also relates to expression vectors and host cells comprising an flas53 or flas65 DNA, the recombinant production of the proteins, antibodies against the proteins, and a method for screening compounds for their ability to bind to, and to inhibit or promote the expression of the proteins. The flas53 and flas85 proteins and nucleic acids can be used to identify compounds which regulate the activity and expression of the proteins. Such compounds may be used as anticancer agents. The present sequence represents an adapter used in the isolation of flas53 and flas88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; skin; dermatological; vulnerary; antipsoriatic; antiseborrhaeic; immunosuppressive; antiinflammatory; cytostatic; SAGB; neurodermatitis; psoriasis; dermatitis; skin cancer; EST; expressed sequence tag; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       In vitro identification of skin-expressed genes, useful for determining homeostasis and identifying cosmetic or pharmaceutical agents against
                                                                                                                                                                                                                                                                                                            Genes expressed specifically in fetal cells and some cancer cells for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 11 BP; 1 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                        (CHUG-) CHUGAI RES INST MOLECULAR MEDICINE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                      screening potential anticancer agents.
                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 40; 111pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ÿ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hofmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABV68122 standard; cDNA; 11 BP.
                                                                                                         99JP-00103356.
                                                       07-APR-2000; 2000WO-JP002281.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-DEC-2001; 2001WO-EP015179.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-JAN-2001; 2001DE-01000127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-OCT-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Σ̈́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CGGCGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conradt
                                                                                                                                                                                                                                                       WPI; 2000-665131/64.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human skin EST 5908.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11 CGGAGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HENK ) HENKEL KGAA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2002-590638/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                          Ose A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200253774-A2
                                                                                                         09-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Petersohn D,
       19-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-JUL-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABV68122;
                                                                                                                                                                                                        Nezu J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABV68122
       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and mallymancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central contracts.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       receptors, CNS and peripheral nervous and non-nervous system peptide transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to tract disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or
                                                                                                                                                                                                                          Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polymucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human foetal liver; fla353; fl8485; recombinant production; antibody; drug screening; anticancer agent; adapter; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Adapter 2 SEQ ID NO:10, used in human foetal gene isolation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 1.9e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 11 BP; 1 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                            Claim 14; Page 118; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC63866 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                            and respiratory obstructions.
99US-0127958P.
                                            (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-FEB-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 GCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGCGGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the present invention
                                                                                                                                                                        WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200061744-A1
06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAC63866;
```

RESULT 306

윱

ð

AAC63866/

Best Loc Matches

ö

Gaps

```
Matches
                                                                                                                                                                                                                                                                                                           ADD4360
 ઠે
                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                  ö
                                          The invention relates to in vitro identification (M1) of genes expressed in the skin of humans or animals by subjecting a mixture of genetically encoded factors from skin, to serial analysis of gene expression. (SAGE) so as to identify skin-expressed genes and quantify their expression. (M1) is useful for identifying genes involved in skin homeostasis; to determine skin homeostasis and to test agent (A) that maintains or promotes skin homeostasis or that can be used for treating skin disorders, specifically neurodermatitis; sunburn, psoriasis, scleroderma; ichthyosis; atopic dermatitis; acne; seborrhea; lupus erythematosus; rosacea; melanoma; basal cell carcinoma; and carcinoma or sarcoma of the skin. The present sequence is that of a human expressed sequence tag (EST) of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                              Wnt-1 induced secreted protein; WISP; Wnt-1 induced gene; WIG; WISP-1; WISP-2; WISP-3; connective tissue growth factor; CTGF; tumour cell; cell death; atherosclerosis; malignant disorder; breast cancer; ovarian cancer; colon cancer; melanoma; antiarteriosclerotic; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New nucleic acid encoding Wnt-1-Induced Secreted Protein, useful for preparing a composition for treating a WISP-related disorder in a mammal comprising atherosclerosis or malignant disorder, e.g., breast, ovarian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to the isolation of novel Wnt-1 induced secreted proteins (WISPs, previously known as Wnt-1 induced gene (WIG)
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                          Adaptor 2 (complement sequence) used to isolate mouse WISP-1 cDNA.
                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                          Length 11;
                                                                                                                                                                                                                                                 1; Indels
                                                                                                                                                                                                   Sequence 11 BP; 0 A; 6 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                          Score 8.4; DB 1;
Pred. No. 1.9e+02;
                                                                                                                                                                                                                                                 0; Mismatches
                       Disclosure; Page 189; 1345pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Fig 14; 205pp; English.
                                                                                                                                                                                                                                                                                                                                             ADB17604/c
ID ADB17604 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97US-0063704P.
98US-0073612P.
98US-0081695P.
98US-00182145.
                                                                                                                                                                                                                          52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27-MAR-2002; 2002US-00112267
                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                 9; Conservative
                                                                                                                                                                                                                                                                      2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Levine AJ, Pennica D;
                                                                                                                                                                                                                                                                                             10 GGCAGGCGC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2003-596689/56.
                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 9; Conserv
e.g. skin cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US2003068678-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              colon cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                    20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-FEB-1998;
14-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mouse; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                              ADB17604;
                                                                                                                                                                                                                                                                                                                                  RESULT 308
                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                         ઠે
```

; 0 polypeptides), and the polynucleotide sequences encoding them. The novel WISP proteins (WISP-1, WISP-3) show homology to connective tissue growth factor (CTGP. Also disclosed are vectors and host cells comprising WISP polynucleotides, chimeric polypeptides comprising WISP polynucleotides, chimeric polypeptides comprising WISP polypeptides, chimeric polypeptides which bind WISP polypeptides, and methods for producing the polypeptides. The antibody may be used in a composition to inhibit the growth of tumour cells by inducing death of the cells which are overexpressing the WISP polypeptides. The WISP polypucleotide sequences are useful for preparing a composition for treating WISP-related disorders such as atherosclerosis New apparatus with a substrate and a modified nucleotide aptamer for monitoring biological interactions, useful for diagnosing and treating NP-kB aptamer-related diseases, such as toxic shock, rheumatoid arthritis, monitoring biological interaction; modified aptamer;
phosphorothioate agonist; phosphorothioate antagonist; antibacterial;
imunosuppressive; antitheumatic; antiantinflammatory;
cytostatic; anti-HIV; antiarteriosclerctic; virucide; neuroprotective;
functional proteomics; nuclear factor kappa-B; NF-kappaB; toxic shock;
sepsis; rheumatory owel disease; asbestos lung disease; Hodgkin's disease;
prostate cancer; ventilator induced lung injury; cancer; AIDS;
human cutaneous T cell lymphoma; lymphoid malignancy;
HTLV-1 induced adult T-cell leukaemia; atherosclerosis; cytomegalovirus;
herpes simplex virus; JCV; SV-40; rhinovirus; influenza;
neurological disorder; lymphoma; ds. This invention relates to a novel apparatus for monitoring biological interaction which comprises a substrate and a modified aptamer attached and malignant disorders (e.g. breast, ovarian or colon cancer or melanoma) in a mammal. The present sequence is used in the examples of Gaps Oligonucleotide duplex Seg ID45 related to biological interactions. ; Score 8.4; DB 1; Length 11; Pred. No. 1.9e+02; 0; Mismatches 1; Indels Sequence 11 BP; 1 A; 7 C; 2 G; 1 T; 0 U; 0 Other; Herzog N, Yang XB; Claim 58; SEQ ID NO 45; 67pp; English. ADD43601 standard; DNA; 11 BP. 52.5%; 90.0%; 07-AUG-2002; 2002WO-US025049. 15-NOV-2001; 2001US-0334887P. 15-JAN-2004 (first entry) Luxon BA, (TEXA) UNIV TEXAS SYSTEM 9; Conservative the present invention. CGGCGGCGG 10 N CGGAGGGCGG WPI; 2003-513977/48. Query Match Best Local Similarity cancer and AIDS WO2003050290-A2 Gorenstein D, Unidentified 19-JUN-2003. ADD43601; ٦ 11 RESULT 309

encoding

polynucleotide sequence

```
to the substrate, where a target molecule or its portion, contacted with the modified aptamer under conditions to allow formation of a complex between the modified aptamer and the target molecule or its portion, is detected. The invention may be useful in developing phosphorothicate agonists or antagonists which may have antibacterial, immunosuppressive, antiarteriosclerotic, ortiantlammatory, cytostatic, anti-HIV, antiarteriosclerotic, virucide or neuroprotective activities. The methods biological interactions and in functional proteomics. As an example, nuclear factor kappa-B (NP-kappaB) aptamers can be used in diagnosing biological interactions and in functional proteomics. As an example, retemined of arthritis, crohn's disease, such as toxic shock, sepsis, retematod arthritis, crohn's disease, such as toxic shock, sepsis, retematod arthritis, crohn's disease, generalised inflammatory bowel disease, asbestos lung diseases, HOGGKIN's disease, prostate cancer, ventilator induced lung injury, general cancer, AlDS, human cutaneous reconstruction and proper simplex virus, JCV, SV-40, rhinovirus, influenza, neurological disorders and lymphomas. The correction of the processes of the present sequence is that of an oligoniclectide duplex which was used divining the construction of the processes of the present sequence is that of an oligoniclectide duplex which was used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              °,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; guanylate binding protein-4; GBP-4; myelodysplastic disorder; myeloproliferative syndrome; acute myeloid leukaemia; cancer; gastric; lung; colon; melanoma; multiple sclerosis; lung disorder; intestinal-related disorder; intesferon-gamma-induced response; macrophage; fibroblast; immune cell; neuroprotective; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 8.4; DB 1; Length 11;
Pred. No. 1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Adaptor #4 used in the cloning of human GBP-4 cDNA.
                                                                                                                                                                                                                                                                                                                                                                                              Sequence 11 BP; 0 A; 2 C; 9 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                        during the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADD95096 standard; DNA; 11 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                  52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-AUG-2000; 2000US-00643657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-00015089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-JAN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ceeeeecee 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 066066666
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US6642024-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          adaptor; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADD95096;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
        $$$$$$$$$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
```

The present invention relates to the isolation of a novel human guanylate binding protein (guanylate binding protein-4 or $\mathsf{GBP-4}$), and the

Example 1; SEQ ID NO 23; 60pp; English.

New isolated nucleic encoding guanylate binding protein-4, useful as hybridization probes, in chromosome and gene mapping, treating cancer, e.g. gastric cancer or melanoma or combating immunological and inflammatory responses.

WPI; 2003-851360/79.

Pennica D;

```
ö
              CBP-4, the CBP-4 polygeptide, and antibodies to GBP-4 are useful in retaring myelodysplastic disorders, myeloproliferative syndromes, acute melanoma). The polynucleotide sequence is useful as hybridisation probes, in chromosome and gene mapping, in generating transgenic animals, in chromosome and gene mapping, in generating transgenic animals, in combating immunosasay, in inducing formation of anti-GBP-4 antibodies, in combating immunological and inflammatory responses and other pathological conditions (e.g. multiple sclerosis or lung and intestinal-related disorders), as a mediator of any interferon-gamma-induced responses in macrophages and fibroblasts, and may also function in other immune cell populations or in protein processing. The present sequence represents an adaptor used in the examples of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to a novel treatment for lung cancer comprising antibodies that bind to the IL-20 receptor beta-chain. An antibody of the invention has cytostatic activity, and controls function and expression of IL-20 receptor beta-chain. The invention is useful for detection and treatment of lung cancer. The present sequence is used in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88; lung cancer; cancer; antibody; cytostatic; IL-20 receptor beta-chain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Treatment for lung cancer comprises antibodies against IL-20 receptor beta-chain and antisense polynucleotides for controlling beta chain
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lung cancer related oligonucleotide of the invention SEQ ID NO:4.
                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                            52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 1.9e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 52.5%; Score 8.4; DB 1; Length 11; Best Local Similarity 90.0%; Pred. No. 1.9e+02; Matches 9; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                        Sequence 11 BP; 1 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 11 BP; 1 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
polynucleotide sequence encoding it. The GBP-4, the GBP-4 polypeptide, and antibod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; SEQ ID NO 4; 93pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADF72794 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-APR-2002; 2002JP-00124743.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-APR-2003; 2003WO-JP005399.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (CHUS ) CHUGAI SEIYAKU KK.
                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                           1 ceccecece 10
                                                                                                                                                                                                                                                                                                                                                                                                                               ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2003-854360/79.
                                                                                                                                                                                                                                                                                                                                                                                                                               11 CGGAGGCCGG
                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003090779-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-NOV-2003.
                                                                                                                                                                                                                                                                                                                                                    ٠.
و
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADF72794;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nezu J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IL-20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 311
                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADF72794/
셤
                                                                                                                                                                                                                                                                                                                                                                                             ð
```

```
first active agent comprising an oligonuclectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nuclectides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entiliflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for for enhancing the prophylactic or therapeutic respiratory effect of an artifulflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine antime antiger or antigened 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pharmaceutical composition for treating ailments associated with impaired
                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; antisense; lung dysfunction; nasal airway dysfunction; antilnflammatory steroid; ubiquinone; antilnflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                  Human adenosine Al receptor antisense fragment no.808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 11 BP; 1 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; SEQ ID NO 10187; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sandrasagra A, Ka
I, Shahabuddin S;
                                                                                                                                                                                                        ABZ94945 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                        (first entry)
10
                                                      N
1 CGCCGGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2003-229219/22.
                                                      11 cegaedeced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ľ, Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200285308-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens.
                                                                                                                                                                                                                                                                                                                        17-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Miller S,
                                                                                                                                                                                                                                                                 ABZ94945;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                   ð
                                                   셤
```

```
The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonuclectide antisense to the initiation codon, coding region, 5 or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nuclectides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an entiinflammatory steroid in a subject, for reducing levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pharmaceutical composition for treating ailments associated with impaired
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed
                                                                                                                                                                                                                                                                                                                Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 1.9e+02; Ative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                               Human adenosine Al receptor antisense fragment no.713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; SEQ ID NO 10092; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                 ABZ94850 standard; DNA; 11 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 52.5
Best Local Similarity 90.0
Matches 9; Conservative
GGCGGCATCG 15
                                        1 GGCGGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200285308-A2
                                                                                                                                                                                                                                    17-0CT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ubiquinone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Miller S,
                                                                                                                                                                                            ABZ94850;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nyce JW,
ઠ
                                   셤
```

ö

ö

Gaps

ö

Query Match 52.5%; Score 8.4; DB 1; Length 11; Best Local Similarity 90.0%; Pred. No. 1.9e+02; Matches 9; Conservative 0; Mismatches 1; Indels

```
This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating comprising oligonucleotides, readerory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, controlleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung dysfunction also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of instructions for adding a carrier and for use of the kit. The composition of the invention has antialergic, antiinflammatcry, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The composition, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, allergies asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary characterin pulmonary disease, pulmonary characterin, pulmonary infections, bronchitis or cancer.
                                                                                                                                                                                                                                                                                                                     Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antisethmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pabalan J, Aguilar D;
                                                                                                                                                                                                                                                                                 Human adenosine Al receptor oligonucleotide fragment 713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 15; SEQ ID NO 10092; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ŕ
                                                                                                                                                   ABD18698 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-APR-2001; 2001US-0286036P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sandrasagra
                                                                                                                                                                                                                                      29-JUL-2004 (first entry)
    7
                                        GCAGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Li Y, Saı
Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200285309-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-0CT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nyce JW, |
Miller S,
                                                                                                                                                                                              ABD18698;
                                                                                                          RESULT 314
                                                                                                                                ABD18698
                                                                                                                                                                                           ઠે
```

The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lumg, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating broncheconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating of preparation of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containners, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antisathmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a Human; antisense; bronchoconstriction, allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic, antifinflammatory; antiastenstic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distracts syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. Gapa Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and Aguilar D; ö Length 11; Human adenosine Al receptor oligonucleotide fragment 808. 1; Indels Katz E, Pabalan J, Sequence 11 BP; 1 A; 2 C; 7 G; 1 T; 0 U; 0 Other; , DB 1; 1.9e+02; 0; Mismatches Claim 15; SEQ ID NO 10187; 763pp; English. Score 8.4; Pred. No. 1 i Y, Sandrasagra A, Ka Tang L, Shahabuddin S; 뗦. 52.5%; 90.0%; 23-APR-2002; 2002WO-US013143 24-APR-2001; 2001US-0286036P (EPIG-) EPIGENESIS PHARM INC ABD18793 standard; DNA; 11 (first entry) Local Similarity 90.0 tes 9; Conservative 2 GGCGGGCGGC 11 1 bronchodilating agent. WPI; 2003-093058/08. Li Y, WO200285309-A2. Homo sapiens. 29-JUL-2004 31-OCT-2002 Nyce JW, I Miller S, ABD18793; Query Match RESULT 315 Matches ABD18793 8888888 용 ð S

```
beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or bronchoconstriction and/or lung inflammation, allergies athma, impeded respiration, respiratory diserses or condition such as pulmonary vasoconstriction, inflammation, pain, cystic fibrosis, allergic rhinitis, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.s., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                             ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Manipulating and testing of molecules e.g. DNA in which a molecule is multiply anchored at one end to a fixed surface and at its other end t paramagnetic bead, does not need force calibrations or sophisticated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to manipulating and testing of molecules and in
                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             overhang; ss; lambda; DNA stretching; DNA rotation; elasticity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bensimon A, Croquette V;
                                                                                                                                                                                                                                                                                                                                                                                             .;
0
                                                                                                                                                                                                                                                                                                                                                          52.5%; Score 8.4; DB 1; Length 11; 90.0%; Pred. No. 1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                        Sequence 11 BP; 1 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Allemand JF, Bensimon D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "illegible"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Phage lambda unpaired 5' overhang.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Fig 6; 18pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= a
/label= UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (CNRS ) CNRS CENT NAT RECH SCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADG93360 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-JUN-2002; 2002US-00163089.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-0041744P.
98US-00049200.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                force study; topology study
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                             9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                6 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGCGGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacteriophage lambda.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-088701/09.
                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_difference 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US2003027187-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-MAR-1997;
27-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strick TR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADG93360;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 316
                                                                                                                                                                                                                                                                                                                                                                                             Matches
     88888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

particular of DNA in which a molecule is multiply anchored at one end to a fixed surface and at its other end to a paramagnetic bead. Also included is an apparatus for the manipulating and testing of molecules, e.g. DNA, comprising a surface to which the molecule is anchored at multiple points at one end by a paramagnetic bead, magnetic forces to control the stretching and rotation of the bead and molecule, optical magnification and a camera for the visualisation of the bead and a computer for analysing motions of the bead from the transmitted camera computer for analysing motions of the bead from the transmitted camera computer for analysing motions of the bead from the transmitted camera computer for analysing motions of the bead is covered with streptavidin. The dispoxigenin at its other end. The surface is covered with streptavidin. The calasticity of the molecules is first determined to select the bead(s) on which just one molecule is a strached. The elasticity of a molecule is a trached. The elasticity of a molecule is changed by rotating the beads around the magnification axis. The cannitoring of the force or of the extension of the molecule is used to apparatus are useful for manipulating and testing DNA by twisting or coiling it can be measured in real-time. The methods and apparatus do not need force calibrations, nor sophisticated tools unlike prior art methods. They also allow real time control of the twisting of a molecule such as DNA in a continuous, reversible and quantitative manner. The present sequence is the unpaired 5' end of phage lambda DNA, which can be used to circularise molecules incorporating it and the 3' unpaired can be used to circularise molecules incorporating it and the 3' unpaired ö Novel chondromedin protein or salts, useful as diagnostic markers for osteitis, arthritis and for screening compounds useful in treating bone and articular diseases such as fracture, osteoarthritis, rheumatoid human; osteopathic; antiarthritic; antirheumatic; chondromedin; marker; Gaps ; Score 8.4; DB 1; Length 11; Pred. No. 1.9e+02; 0; Mismatches 2; Indels Human chondromedin protein related oligonucleotide #33. Sequence 11 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 1 Other; Example 3; Page 75; 107pp; Japanese BP. 52.5%; 81.8%; 30-OCT-2003; 2003WO-JP013919. 30-OCT-2002; 2002JP-00315573. 28-NOV-2002; 2002JP-00345601. (TAKE) TAKEDA CHEM IND LID. ADO26321 standard; DNA; 11 29-JUL-2004 (first entry) Best Local Similarity 81.8 Matches 9; Conservative 5 GGGGGGCATCG 15 11 Watanabe T, Inazuka M; GGGCGGCGNCG WPI; 2004-390322/36. WO2004039974-A1 Unidentified. 13-MAY-2004. AD026321; Query Match RESULT 317 AD026321 ઠે 日

Gaps

```
This invention describes a novel in vitro method for identifying genes that are significant for facial skin in humans. The method comprises recovering, from facial skin, a first mixture of genetically expressed (transcribed and optionally translated) factors (i.e. proteins, mRNA or their fragments), recovering a second, similar mixture from some other human tissue, preferably skin from a protected area, especially from the breast and subjecting the mixtures to serial analysis of gene expression (SAGE) to identify those genes for which expression is markedly different between facial skin and the other tissue. The invention also describes and its method for determining homeostasis of human facial skin, a test kit which comprises a solid support (flexible or rigid) on which are immobilised probes that bind specifically to the factors of interest and a biochip for determining homeostasis of human facial skin. The products of the invention are also used in a method which determines activity of cosmetic and pharmaceutical agents for use against disorders or cosmetic and pharmaceutical agents for use against disorders or
                                                                          such as fracture, chondrodystrophy, osteodystrophy, osteoporosis, osteoarthritis, rheumatoid arthritis, synovitis and metabolic arthritis, and as markers in the diagnosis of the above conditions. The present sequence is a polynucleotide sequence shown in the exemplification of the
                The present invention relates to mature and precursor chondromedin protein sequences. Also provided are the coding sequences. The sequences are useful for preventing and/or treating bone and articular diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       In vitro identification of genes important for facial skin, useful for assessing homeostasis and in screening for pharmaceutical or cosmetic agents, based on differential expression analysis.
                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         facial skin; human; serial analysis of gene expression; SAGE;
homeostasis; biochip; cosmetic; pharmaceutical; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Holtkoetter O
                                                                                                                                                                                                                                             Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human facial skin-associated DNA fragment SEQ ID NO 2004.
                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                              Sequence 11 BP; 0 A; 7 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                     52.5%; Score 8.4; DB 1; 90.0%; Pred. No. 1.9e+02; iive 0; Mismatches 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gassenmeier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 5; SEQ ID NO 2004; 577pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            AD033914 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-DEC-2002; 2002DE-01060928.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-DEC-2002; 2002DE-01060928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schlotmann K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                            Local Similarity 90.0
nes 9; Conservative
                                                                                                                                                                                                                                                                                                                      2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Petersohn D, Schlucher Hofmann K;
                                                                                                                                                                                                                                                                                                                                            GACGGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-518855/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HENK ) HENKEL KGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DE10260928-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       facial skin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-JUL-2004
                                                                                                                                                               nvention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADQ33914;
                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                         ADQ33914/c
¥88888888888
                                                                                                                                                                                                                                                                                                                      ઠે
                                                                                                                                                                                                                                                                                                                                                         유
```

```
ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          adaptor molecule. The upper strand sequence is also provided AD073965. The adaptor was added to CDNA samples derived from Melampsora lini (flax rust) RNA in the preparation of driver and tester CDNAs for subtractive hybridizations. Libraries were constructed from subtracted cDNAs and used to identify nucleic acids AD073956 encoding avirulence products AD073951-AD073962 of M. lini. Such nucleic acid molecules can be used in transformation of a plant to induce a disease resistance response in the plant, optionally by co-expression with a corresponding disease resistance gene in the plant. The transformed plant is a crop or cereal plant, especially flax or tobacco.
               identification of as many as possible of the genes important for facial skin and thus of a very wide range of potential therapeutic and cosmetic agents. AD031911-AD035111 represent human DNA Tag fragments used to identify the facial skin-associated genes described in the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New nucleic acid molecule comprising a sequence of nucleotides encoding or complementary to a sequence of nucleotides encoding an avirulence product of a plant rust fungus, useful in inducing a disease resistance response in a plant.
                                                                                                                                                                   Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present sequence is that of the lower strand of a double-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gape
                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                               Score 8.4; DB 1; Length 11;
Pred. No. 1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 8.4; DB 1; Length 11; Pred. No. 1.9e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                               disease; crop improvement; transgenic plant;
                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                               Sequence 11 BP; 0 A; 6 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11 BP; 1 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ayliffe MA, Ellis JG;
                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; SEQ ID NO 32; 156pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (CSIR ) COMMONWEALTH SCI & IND RES ORG. (GRAI-) GRAINS RES & DEV CORP.
                                                                                                                                                                                                                                                                                                               ADU73966 standard; DNA; 11 BP.
                                                                                                                              52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-MAY-2003; 2003AU-00902173.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Melampsora lini; adaptor; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-MAY-2004; 2004WO-AU000602
                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                               Local Similarity 90.0
nes 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dodds PN, Lawrence GJ,
                                                                                                                                                                                                2 GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 096066666 10
                                                                                                                                                                                                                                                                                                                                                                                                              Adaptor lower strand
                                                                                                                                                                                                                             GGCAGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2004-814058/80.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2004099417-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                             fungal
                                                                                                                                                                                                                                                                                                                                                                              10-FEB-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-NOV-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                              ADU73966;
                                                                                                                                                                                                                             20
                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                               Plant
                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
888888
                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                             윱
                                                                                                                                                                                                                                                                                                                              ò
                                                                                                                                                                                                                             ö
```

```
07-APR-2005.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-MAR-2003
18-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAT41826;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAT4182
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                 (GBP-4; ADU55645) and its coding ageneric (ADU59643 and ADU55673). The CDAR clone encoding GBP-4 was isolated from a gastric adenocarcinoma by suppressive subtractive hybridization (SSH). The human GBP-4 gene was localized to chromosome 1p31-1p32. Immunoelectron microscopy indicated that GBP-4 is associated with the membranes of endolysosomes. GBP-4 was found to be expressed in many normal rissues, with the highest levels in peripheral blood leukcytes, lymph node and the spleen as well as gastric adenocarcinoma tissue. GBP-4 expression is induced in human cell lines by gamma-interferon (IFN-gamma). GBP-4 is useful in preparing a composition for treating inflammatory damacers or cancer. The present
                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention relates to a novel human guanylate-binding protein
                                                                                                                                                                                                                                                                                                                                                                    New guanylate-binding protein-4 (GBP-4) polypeptide, useful in preparing a composition for treating inflammatory disorders or cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                    Cytostatic; antiinflammatory; gene therapy; gastric adenocarcinoma; inflammatory disorder; cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 52.5%; Score 8.4; DB 1; Length 11; Best Local Similarity 90.0%; Pred. No. 1.9e+02; Matches 9; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the GBP-4 coding sequence using the SSH technique.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human SNP detection related oligonucelotide #1772.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11 BP; 1 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                     Example 1; SEQ ID NO 23; 62pp; English
                                                                                                                                Adaptor oligonucleotide, SEQ ID 23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADZ24805 standard; DNA; 11 BP.
                                                                 ADU59664 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                      29-JAN-1998; 98US-00015089
17-AUG-2000; 2000US-00643657
                                                                                                                                                                                                                                                 10-SEP-2003; 2003US-00659549
                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-JUN-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 CGGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                      (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                WPI; 2004-813250/80.
||| |||||
11 CGGAGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11 CGGAGGGCGG
                                                                                                                                                                                                       US2004229307-A1.
                                                                                                          10-FEB-2005
                                                                                                                                                                                                                             18-NOV-2004.
                                                                                                                                                                                                                                                                                                                            Pennica D;
                                                                                                                                                                                   Synthetic.
                                                                                     ADU59664;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADZ24805;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADZ24805/c
ID ADZ2.
XX
AC ADZ2.
XX
XX
DT 16-JI
XX
DE Humaa
                                                                 셤
           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
The invention relates to a method of analyzing haplotype, by detecting gene polymorphism in drug-related genes such as aryl acceylamide deacetylase, arylalkylamine Nacetyl transferase or ATP-binding cassette, sub-family A (ABC1), member 1. The method is useful for analyzing haplotype. The method is useful for selecting medicine for ca foreign meterial, for selecting medicine for consequence or a foreign meterial, for selecting medicine for medicine or a foreign meterial, for determining appropriate dosage of medicine for preventing or treating disease, for analyzing a drug interaction, and for determining the related polymorphism relative to the sensitivity of the medicine, foreign material or disease. The disease include malignant tumor, immune disorder circulatory disease, metabolic disease, kidney disease, respiratory disease and muscle associated disease. The method enables analysis of the individual differences related to the sensitivity of a medicine, using a haplotype, without using each single nucleotide polymorphism. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Analyzing haplotype, by detecting polymorphism in drug-related genes, electing common polymorphism (CP), building haplotype block using CP, specifying CP within block, specifying tag polymorphism from CP within block.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
ss; haplotype mapping; SNP detection; tumor; cytostatic; neoplasm; immune disorder; cardiovascular disease; metabolic disorder; respiratory disease; musculoskeletal disease; renal disease; nephrotropic; endocrine disease; genitourinary disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52.5%; Score 8.4; DB 1; Length 11; larity 90.0%; Pred. No. 1.9e+02; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  represents a human SNP detection related oligonucelotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Saito S, Nakamura Y, Kamatani N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HLA allele, HLA-DQB1*03 resolution probe, PPAA.57.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11 BP; 1 A; 6 C; 2 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; SEQ ID NO 1772; 1290pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                               30-SEP-2004; 2004WO-JP014784.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-SEP-2003; 2003JP-00342519.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-MAY-2004; 2004JP-00158717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAT41826 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (RIKE ) RIKEN KK.
(STAG-) STAGEN CO LTD.
(SEKI/) SEKINE A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2005-305936/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 CGGGGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sekine A, Iida A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
nes 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (IIDA/) IIDA A.
(SAIT/) SAITO S.
                                                                                                                                                                                                                                                                                     WO2005030952-A1.
                                                                                                                                                                                                           Homo sapiens
```

```
AAV47191;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                       Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAV47191
       EXXXXEXE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          요
                                                                                                                                                                                                                                                                                                                                                                           The sequences given in AAT41821-29 represent probes which were used to resolve the human leukocyte antigen (HLA) DQB1*03 alleles. This probe sequence hybridises to sequences found in alleles 0302 and 0304. These probes may be used in the method of invention which concerns HLA typing of a sample for an unknown pair of alleles. The pair of alleles comprises come of two known types which have the same overall set of polymorphisms but have a different distribution of polymorphisms between their two alleles. The method comprises selectively amplifying the DNA of just one which polymorphisms are present in that allele, and therefore assigning the unknown pair to the known type having that allele. The method comprises three test stages. The first stage is to establish the number of alleles present in each sample. Primers corresponding to fairly well conserved regions of a locus will increase the likelihood that unknown conserved regions of a locus will increase the likelihood that unknown a probe. In the second stage, the group or basic type identified and potentially detected by hybridisation with a probe. In the second stage, the group or basic type identified of etermines which set of allele specific primers will be used. The first of the two primers comprises an opt. labeled sequence common to each allele of the group identified in the first stage but different from cother groups identified in stage one. The second primer may be adone by the different labeled primers, complementary to two or more sequences of different labeled primers, complementary to two or more sequences within the group, or the amplification one. The second primer to detect the presence of a single group of alleles. In the second primer to detect the presence of a single group of alleles. The method of the invention esp. distinguishes between the population using a radiolabballed probe. The method of the invention esp. distinguishes between the 25-MAR-2003 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ô
                                                                                                                                                                                                                                                                                                         Human leukocyte antigen typing of tissue samples - using allele-specific amplification to distinguish allele pairs.
Human leukocyte antigen; HLA; allele; HLA-DR*08; HLA-DR*12; locus B1;
polymorphism; amplify; conserved region; detection; primer; probe;
tissue matching; identifying disease susceptibility; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12 BP; 1 A; 3 C; 8 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                              (BLOO-) BLOOD CENT RES FOUND INC.
                                                                                                                                                                                                                                                                                                                                                   Example 2; Col 19; 24pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV47308 standard; DNA; 12 BP.
                                                                                                                                                      93US-00025038
                                                                                                                                                                                  90US-00544218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 90.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CGGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 CGCAGGCG 12
                                                                                                                                                                                                                                                                           WPI; 1996-383664/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  correct PF field.)
                                                                                                                                                                                                                                              Baxter-Lowe LA;
                                                                                                                                                    01-MAR-1993;
                                                                                                                                                                                  27-JUN-1990;
                                                                                          JS5545526-A
                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAV47308;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAV47308
 ò
```

```
Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine AI receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the Gprotein coupled family of call surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                      Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                              /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
Antisense oligonucleotide 808, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Antisense oligonucleotide 691, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV47191 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCGCCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                   Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9823294-A1
                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-JUN-1998.
                                                                                                                                                                                                                      Synthetic
```

```
日文公文市文田
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and on the provent conditions associated with the pronchoconstriction and or the dispersent conditions associated with the pronchoconstriction and or the dispersent conditions associated with the pronchoconstriction and or the process and the proposed the process of the process of the dispersent conditions associated with the pronchoconstriction and or the process of the process 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
               Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                /*tag= a
note= "contains phosphorothioate internucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Antisense oligonucleotide; multiple target; antisense treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52.5%; Score 8.4; DB 1; Length 12; llarity 90.0%; Pred. No. 2.2e+02; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     allergy, emphysema and cystic fibrosis
                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAX53685 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                  96US-00757024.
                                                                                                                                                                                                                                                                                                                              97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                     EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                    linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GGAGGCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                            Key
modified_base
                                                                                                                                                                                                                                                                                                                                                                                                   (UYEC-) UNIV
                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                      WO9823294-A1
                                                                                                                                                                                                                                                                                                                              26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                  26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-JUL-1999
                                                                                                                                                                                                                                                                                          04-JUN-1998
                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX53685
                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAX53685
2×2×4×8×8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271)
directed against at least 2 mRNAs selected from target genes, coding and
non-coding regions of RNAs corresponding to target genes, coding and
non-coding regions of RNAs corresponding to target genes, coding and
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
end and the juxta-section between coding and non-coding regions and all
segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX55272-74. These multiple target oligonucleotides
conditions or mixtures. Typical diseases and conditions are those
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
caute asthma, allergies, asthma, impeded respiration, respiratory
distress syndrome, pain, cystic fibrosis, pulmonary hypertension,
clistress syndrome, pain, cystic fibrosis, pulmonary hypertension,
clistress such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, pancreatic cancer,
hepatocellular carcinoma, kidney cancer, melanoma, hepatic metastases, as
colon sancers which may metastasize or have metastasized
colon tancers which may metastasize or have metastasized
impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 40; 120pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97US-0059160P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAX53568 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 GGCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                       prostate cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-SEP-1997;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAX53568;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAX53568
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271)

directed against at least 2 mRNAs selected from target genes, coding and
con-coding regions of RNAs corresponding to target genes, coding and
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
codons or mixtures. The antisense coligonucleotides may be derived
from sequences AAX5512-74. These multiple target oligonucleotides
conditions or mixtures. The mention and inflammation, including lung
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
caute asthma, allergies, asthma, impeded respiration, respiratory
disease (COPD), and cancers such as leukemias, lymphomas, carcinomas
colon cancer, breast cancer, lung cancer, pancreatic cancer,
colon cancer, breast cancer, lung cancer, pancreatic cancer,
colon cancer, breast cancer, lung cancer, melanoma, hepatic metastasized
colon cancer, breast cancer, melanoma, hepatic metastasized
colon cancer, breast and prostate cancer
               Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New antisense oligonucleotides used in treatment of, e.g. pulmonary vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                       97US-0059160P.
98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                             98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 90.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GGAGGGCGC 12
                                                                                                                                                                                                              prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                             17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                       17-SEP-1997;
                                                                                                                                                                                                                                                                                             WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                             09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                      25-MAR-1999.
                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA3301
ð
```

```
The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets nucleic acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antiinflammatory, antiallergic, antisermentic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, imposed respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers which may metastasise to the lungs, including or carcinomas, and cancers which may metastasise to the lungs, including or content of the content of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ONs reduces side effects. The A-containing ONs break down with the release of deoxyadenosine which activates adenosine receptors causing bronchoconstriction and inflammation. AAA32313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 sequences are also called SEQ ID NO:1 to 185, but the sequences differ from the previously named sequences. SEQ ID NO:11 to 1680 (AAA32323 to AAA33992) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention of match up with their corresponding SEQ ID NO: sequences given in the sequence
                                                            Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antisthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 8.4; DB 1; Length 12;
Pred. No. 2.2e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                 cancer; leukaemia; lymphoma; carcinoma; metagtasis; ss.
                     Low adenosine antisense oligonucleotide SEQ ID NO:700.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 18; Page 354; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 90.v.,
Local 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                        WO200009525-A2
                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                   03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                      24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                listing
```

Gaps

ö

11

ටප්පටප්පටප්ප

ઠે д

AAA33011 standard; DNA; 12 BP.

28-JUL-2000 (first entry)

AAA33011;

ö

Gaps

GGAGGCCGC 12

RESULT 328

```
antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                   Human, adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                           New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                     cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                               Low adenosine antisense oligonucleotide SEQ ID NO:817.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 18; Page 368; 1343pp; English.
            AAA33128 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                              99WO-US017712
                                                                                                                                                                                                                                                                                                    98US-0095212P
                                                                                                                                                                                                                                                                                                                         (UYEC-) UNIV EAST CAROLINA.
                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-205971/18.
                                                                                                                                                                                                                                WO200009525-A2.
                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                              03-AUG-1999;
                                                                                                                                                                                                                                                                                                    03-AUG-1998;
                                                        28-JUL-2000
                                                                                                                                                                                                                                                       24-FEB-2000
                                 AAA33128;
                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
AAA33128
```

```
The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets conditions involved in bronchoconstriction, allergies, and/or antialetacid acids involved in bronchoconstriction, allergies, and/or confidential through an antialetacy, antialetacic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating c. g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impaced respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers which may metastasise to the lungs, including carcinomas, and cancers which may metastasise to the lungs, including cracinomas, and cancers which may metastasise to the lungs, including cracinomas, and cancers which may metastasise to the lungs, including cracinomas, and cancers which activates adenosine content of the concerning one broad down with the correspond to SEQ ID NO:1 to 2815, and then the present the invention, which correspond to SEQ ID NO:1 to 2815, and then the last 185 from the previously named sequences. SEQ ID NO:1 to 1860 (AAA31392) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention. N.B. Sequences given in the disclosure of the present invention on the sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        with their corresponding SEQ ID NO: sequences given in the sequence
```

Gaps

; 0

Similarity 90.0%; Pred. No. 2.2e+02; 9; Conservative 0; Mismatches 1; Indels

Query Match Best Local Similarity Matches 9; Conservat

```
The lingual relates to new methods of determining the Dinnorton relates to new methods or determining the Dinnorton relates to new methods or determining the digand to an oligonucleoride sequence, particularly to a duplex. The ligand is typically a metal ion, a small organic or inorganic molecule, a protein or a multi-protein complex. The methods comprise measuring the effect of adding increasing amounts of a ligand on a signal generated by two indicator oligonucleorides of the duplex. In the absence of ligand, two indicator oligonucleorides of ligand to double-stranded nucleic acids conditions are such that the oligonucleorides exist primarily in single-stranded form, binding of ligand to double-stranded nucleic acids the indicator oligonucleorides contains a first group contains a second group that duplex formation is favoured. One of the indicator oligonucleorides contains a second group that on hybridisation of the two indicator contains a second group that on hybridisation of the two indicator. The signal may be increased or decreased on hybridisation. For example, the signal may be increased or decreased on hybridisation. For example, the signal may be increase in signal intensity indicates that scintillant (where an increase in signal intensity indicates that scintillant (where an increase in signal intensity indicates that hybridisation has cocurred). Other methods of the invention comprise a strand diplacement assay, where the ability of an unlabelled displace one of the oligonucleotide is determined in the absence and presence of ligand; and a competition assay, where an unlabelled single or double-stranded competitor oligonucleotide sequence. They are particularly useful for determining the binding affinities of various oligonucleotide sequences. Particularly double-stranded oligonucleotide sequences. The sequences may be added to the ligand be acided to a dignal content configuration assays allow rapid and convenient determination of nucleic acide binding affinities. Sequences the invention sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to new methods of determining the binding affinity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Determining binding affinity of a ligand to an oligonucleotide sequence in double stranded form, comprises measuring the effect of adding increasing amounts of a ligand on a signal generated by two indicator
                                                                                                                                                                                                                                                                                                                                          Nucleic acid ligand binding assay; duplex formation; stability; detectable signal; competition assay; competitor oligonucleotide; ds.
                                                                                                                                                                                                                                                                                             DNA ligand binding assay competitor oligonucleotide, SEQ ID NO:30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 7-8; Page 20; 78pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GENE-) GENELABS TECHNOLOGIES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Suh YJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           oligonucleotides of the duplex.
                                                                                                                                                           AAA10347 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US020719.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-00151890.
                                                                                                                                                                                                                                                  03-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Schroth GP, Bruice TW,
                          GGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-271478/23.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200015848-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-MAR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                    AAA10347;
                                                                                                              RESULT 32
AAA10347/
                                                                                                                                                                                 8
                                        셤
```

```
Synthetic.
                                                                                                                                                                                                                                                                                                     AAA03370;
                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   renal
                                                                                                                                                            Matches
                                                                                                                                                                                                                                                               AAA03370
    888888888888
                                                                                                                                                                                                           g
                                                                                                                                                                                   ઠે
                                                                                                                                                                                                                                                                                                    The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine A2a receptor agonist (Ia), or an oligonucleotide corresponding RNa, to genomic flanking regions or orersponding RNa, to genomic flanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2b or A3 receptors, and has to agonist activity or A2a antagonist activity for at least no agonist activity at this receptor). (I) may be a mixture of Ia) and (1b), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary bypoxia associated with administration
                                                                              ö
                                                                                                                                                                                                                                                                                                Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine Asa receptor; adenosine Asa receptor; approprior; adenosine Asa receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; esupraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                               Gaps
                                                                                                                                                                                                                                                                       Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:771.
                                                                            ;
0
                                                Score 8.4; DB 1; Length 12;
Pred. No. 2.2e+02;
0; Mismatches 1; Indels
                        Sequence 12 BP; 2 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 17; Page 35; 252pp; English.
                                                                           ;
0
                                                                                                                                                                                           AAA03487 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0088501P.
98US-00093972.
98US-0088657P.
                                                52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                             19-MAY-2000 (first entry)
                                               Query Match
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                     15
                                                                                                                  |||||| ||||
GGCGGTATCG 3
                                                                                                   6 GGCGGCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hill JL;
present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , 8661-NUT-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                      AAA03487;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW,
                                                                                                                                                                                AAA03487
SXS
                                                                                                                           셤
                                                                                                     ઠે
                                                                                                                                                                                                          CCCCCCCCCCCCCCCCX8X444X8X1X8X8X8X8X8X8X88X8
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardipulmonary and/or renal damage and/or failure.

(I) is an adenosine Aza receptor agonist (Ia), or an oligomucleotide (Ib), containing less than 15* adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine Al, Aza, Azb or Az receptors, and has Al, Azb or Az agonist activity or Aza antagonist activity (or at least no agonist activity at this receptors). (I) may be a mixture of (Ia) and (Ib), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine
of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02717, AAA02719, AAA02721 and AAA02723 to AAA03715 represent specifically claimed phosphorothioate antisense oligonuclectices for use in the composition of the present invention. AAA02718, AAA02720, AAA02721 and AAA03716 to AAA03720 represent other phosphorothioate oligonuclectides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothicate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergic; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:654.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; adenosine Al receptor; antisense oligonucleotide; hypoxia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                             Score 8.4; DB 1; Length 12;
Pred. No. 2.2e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                               Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 17; Page 33; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA03370 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                 y Match 52.5%;
Local Similarity 90.0%;
hes 9; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0088501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 GCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW, Hill JL;
                                                                                                                                                                                                                                         present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9963938-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-DEC-1999
```

```
;
0
receptor-mediated cardiac, lung and/or renal damage or failure (particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); allergic rhinitis; chronic obstructive pulmonary disease; cardiopulmonary hypoxia associated with administration of stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02711, AAA02719, AAA02721 and AAA02723 to AAA03715 represent specifically claimed phosphorothicate antisense oligonucleotides for use in the composition of the present invention. AAA02718, AAA02720, AAA02710 represent invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Low adenosine (A) content antisense oligonucleotides which do not trigger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                   52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor polynucleotide fragment #700.
                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                          Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 14; Page 117; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF19133 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-MAR-2000; 2000WO-US008020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99US-0127958P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGGCGGC 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-679539/66.
                                                                                                                                                                                                                                                        present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200062736-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UYEC-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (NYCE/) NYCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF19133;
                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 332
AAF19133
      8888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    à
```

The antisense oligonuclectides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with corpression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodes, antibody receptors, cytokines and activating proteins, adenosine receptors, cytokines and chemokines endogenously produced specific and non-specific enzymes, binding proteins, adenosine receptors, bradykinin receptors, central cremokines receptors, and peripheral nervous and non-nervous system receptors, and peripheral nervous and non-nervous system creceptors, and peripheral nervous and non-nervous system creceptors, and peripheral nervous and non-nervous system creceptors, binding proteins and malignancy associated proteins. The receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction) and/or lung inflammation, allergy(ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergic syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary transplantation rejection, pulmonary disease syndrome company transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragment invents and antisense oligonucleotides used in the exemplification of the manner of the content of the processor of the present invents and antisense oligonucleotides used in the exemplification of human, airway disorder; bronchoconstriction; lung inflammation; businfactant depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiathmatic; analgesic; hypotensive; oytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis; immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. Gaps ; 0 Score 8.4; DB 1; Length 12; Pred. No. 2.2e+02; 0; Mismatches 1; Indels Human adenosine Al receptor polynucleotide fragment #817. Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other; AAF19250 standard; DNA; 12 BP. 52.5%; 90.0%; 24-MAR-2000; 2000WO-US008020. 99US-0127958P. (UYEC-) UNIV EAST CAROLINA. (NYCE/) NYCE J W. 14-MAR-2001 (first entry) Local Similarity 90.0 2 GGCGGCCGC 11 || ||||||| GGAGGCGGC 12 present invention WO200062736-A2. Homo sapiens. 06-APR-1999; 26-OCT-2000. cancer; ss. AAF19250; Query Match Nyce JW; RESULT 333 Matches the **AAF1925**0 %XGGGGGGGGGGGGGGGGGGGGGG ð 셤

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense coligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to dom-regulate the expression and or activity of target polypeptides associated with cattoring peptide factors and malignancies, such as stimulating and cattoring peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, chemokine receptors, adenosine receptors, bradykinin receptors, cutrail controls system (CNS) and peripheral nervous and non-nervous system (CNS) and peripheral nervous and non-nervous system (CNS) and peripheral nervous and non-nervous system creeptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy (ies) and/or condition selected from pulmonary vasocoated with a disease or condition selected from pulmonary vasocoated with a disease or condition as asthma, impeded respiration, respiratory disease syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary imperation rejection; nulmonary infertions, bronchitis
                                             Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oligonucleotide primer SEQ ID NO 277600 for detecting SNP TSC0004520.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                    Claim 14; Page 118; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABH77607 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06-APR-2001; 2001WO-IB000713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 GCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGCGGCATGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the present invention
WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200177384-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABH77607;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 334
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

Gaps

.; 0

```
acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligomucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010-ABC99989, ABR00010-ABR99989, ABR00010-ABR99989, ABR00010-ABR99989, ABR00010-ABR99899 and ABI00010-ABR3073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but the was obtained in electronic format from WIPO at
                                                                                                                                                                                                        This invention describes novel oligonucleotide primers or peptide nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention describes novel oligonucleotide primers or peptide nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oligonucleotide primer SEQ ID NO 322459 for detecting SNP TSC0030884.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                             Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine methylation status.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                     Claim 1; SEQ ID NO 277600; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; SEQ ID NO 322459; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 12 BP; 1 A; 2 C; 8 G; 1 T; 0 U; 0 Other;
                                  Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-APR-2001; 2001WO-IB000713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABI22486 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 90.0
                                  Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Piepenbrock C,
(EPIG-) EPIGENOMICS AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIG-) EPIGENOMICS AG
                                                                    WPI; 2001-657177/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GGCGGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-657177/75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200177384-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABI22486;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        olek A,
                                  olek A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABI22486/
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

```
ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acid (PNA) oligomers for detecting single nuclectide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligomucleotides are used for diagnosis and/or prognosis of cancer and range of diseases including immune system, gastrointestinal, respiratory. Central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC0010-ABC9989, ABC0010-ABB9989, ABC0010-ABB9989, ABC0010-ABB9989 and ABI0010-ABI82073 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format from WIPO at the printed specification, but ftp.wipo.int/pub/published_pct_sequences
acid (PNA) oligomers for detecting single nucleotide polymorphisms (SNP) and cytosine methylation status in chemically pretreated genomic DNA. The oligonucleotides are used for diagnosis and/or prognosis of cancer and a range of diseases including immune system, gastrointestinal, respiratory, central nervous system, cardiovascular and metabolic disorders. The oligomers are also used for detecting cell type differentiation. ABC00010 represent the oligomers described in the invention. NOTE: The sequence data for this patent did not form part of the printed specification, but ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This invention describes novel oligonucleotide primers or peptide nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNP; single nucleotide polymorphism; human; diagnosis; PNA; cancer; CNS; peptide nucleic acid; cytosine methylation; cardiovascular; primer; ss; central nervous system; gastrointestinal; respiratory; immune; metabolic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oligonucleotide primer SEQ ID NO 314171 for detecting SNP TSC0026157.
                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Set of oligonucleotides, useful for diagnosis and cell typing, is designed to detect single-nucleotide polymorphisms and cytosine methylation status.
                                                                                                                                                                                                                                                                                                                                     ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; SEQ ID NO 314171; 29pp + Sequence Listing; German.
                                                                                                                                                                                                                                                                                          52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                    Sequence 12 BP; 2 A; 8 C; 2 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Berlin K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABI14198 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-APR-2001; 2001WO-IB000713.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-APR-2000; 2000DE-01019173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                               Local Similarity 90.0
es 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Olek A, Piepenbrock C,
                                                                                                                                                                                                                                                                                                                                                                           1 CGGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (EPIG-) EPIGENOMICS AG.
                                                                                                                                                                                                                                                                                                                                                                                                                 ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-657177/75.
                                                                                                                                                                                                                                                                                                                                                                                                                 11 cecceeres
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200177384-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABI14198;
                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                  Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABI14198
                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠ
      8
```

Sequence 12 BP; 1 A; 2 C; 7 G; 2 T; 0 U; 0 Other;

```
The invention relates to a method of cloning a structurally characterised DNA or a flanking DNA containing part of the characterised characterised bnA or a flanking DNA containing part of the characterised valid creator by concentrating the DNA of interest using a substance which specifically recognises the structurally characterised region or a fragment thereof, and selectively cloning only the DNA of interest by subtraction treatment. The invention especially relates to a method for cloning or detecting a minutely mutated DNA by concentrating the mutated DNA using a substance (such as a mismatch repair protein) which specifically recognises mismatched DNA, and selectively cloning only the cutant DNA. Such a method of detection. The method was exemplified by the cloning and sequencing of DNA from the PAO128 strain of Pseudomonas ceruginosa using an immobilised maltose binding protein (MBP)-MUTS fusion protein, and the corresponding DNA from Pseudomonas aeruginosa strain companied mismatches in PAO1/PAO128 DNA duplexes. The cutant (1.e., PAO128) DNA was thus concentrated, amplified via PCR, and contaminating DNA removed by RDA. A Pseudomonas aeruginosa strain PAO128 (1brary was constructed and its genome sequenced Such a protocol may be used for the detection of Pseudomonas aeruginosa strain PAO128 (1brary was constructed, amplification of the crepresent the strands of an adapter used in an exemplification of the interval of an adapter used in an exemplification of the interval.
                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Detection of minutely mutated DNA useful for detection and treatment of Pseudomonas aeruginosa, and development of antibacterial agents comprises cloning a structurally characterized DNA.
                                                                                                                                                                                                                                                                                                                                                                                         Selective cloning; mismatch detection; mismatch binding protein; MutS; mutant gene; bacterial infection; TaqI adapter; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                             Gaps
                                                             .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 52.5%; Score 8.4; DB 1; Length 12; Best Local Similarity 90.0%; Pred. No. 2.2e+02; Matches 9; Conservative 0; Mismatches 1; Indels
                Score 8.4; DB 1; Length 12;
Pred. No. 2.2e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 12 BP; 1 A; 5 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 4; Page 8; 13pp; Japanese.
                                                                                                                                                                                                                                        ВЪ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99JP-00121957.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99JP-00121957.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (DAUC ) DAIICHI PHARM CO LTD.
                    52.5%;
90.0%;
                                                                                                                                                                                                                                        AAF27246 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                    (first entry)
                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                         TagI adapter, strand #2.
                                                                                                  10
                                                                                                                                      10
Query Match
Best Local Similarity
-haq 9; Conserv?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-127778/14.
                                                                                                                                      CGGAGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JP2000308489-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-APR-1999;
                                                                                                                                                                                                                                                                                                                    24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-NOV-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                               AAF27246;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           invention
                                                                                                                                                                                               RESULT 337
                                                                                                                                                                                                                      AAF27246,
                                                                                                                                                                                                                                                           ઠ
                                                                                                                                      셤
```

RESULT 338

g

ઠે

ABX14213

```
The invention relates to a method for determining the relative binding affinities of a ligand to different oligonucleotides. A mixture is formed from two oligonucleotides, one carrying a label and a second containing a group that alters the signal from the label, when the sequences hybridise. In the absence of the ligand, the oligonucleotides exist mainly in single-stranded form and the signal is recorded in this state. The ligand is then added and the signal measured again, and the effect compared with that observed for a different pair of oligon. The relative binding affinities of the ligands are determined by comparing their effects. Sequences ABK70559-ABK70629 represent oligonucleotides used for determining relative binding affinities of ligands
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 .5
/*tag= b
/bound moiety= "oligonucleotide F"
/note= "forms double-stranded region with bases 1-5 of
sequence in AAI70897"
                                                                                                                                                                                                                                                                                                                                        Determining relative affinity of ligands for oligonucleotides, from ability to separate a duplex of oligonucleotides, one labeled and the other having a signal modifying group.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /*tag= c
/note= "N at position 6 represents a target-specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12 BP; 2 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Molecular beacon component oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Molecular beacon; ligation; detection; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'note= "5' phosphate"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                         (GENE-) GENELABS TECHNOLOGIES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure, Col 17; 51pp; English.
                                                                                                                                                                                                                                                                Schroth GP, Bruice TW, Suh YJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВЪ.
                                                                                                                                                                                  98US-00151890.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*tag= a
/label= OTHER
                                                                                                                                           99US-00393783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAI70896 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local Similarity 90.0
Matches 9, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 GCCGCCATCG 15
                                                                                                                                                                                                                                                                                                     WPI; 2002-380936/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12 GGCGGTATCG
                                                               US6355428-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         modified_base
                                                                                                                                           10-SEP-1999;
                                                                                                                                                                                  11-SEP-1998;
                                                                                                      12-MAR-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAI70896;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAI70896
        ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a gene expression differential display method for systematically comparing different gene expression integral conditions and finding differentially displayed genes, comprising (a) firstly, using random primer and ligand-labeled oligo (dT) primer to synthesise double-stranded cDNA; (b) using the in-wall tube with ligand coating to adsorb the cDNA 3, terminal enzyme-cut fragment labeled with ligand; (c) making the absorbed double-stranded cDNA undergo the processes of enzyme-cutting and elution, and connect with linker; and (d) making the material undergo the processes of first-turn PCR amplification and second-turn selective PCR amplification so as to obtain clear 3 ESTS (expressed sequence tass) discrete spectrum. The present sequence is a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                       вв; РСR; primer; differential display; gene expression; EST;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Quickly-ordered gene expression difference display method.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ligand binding affinity determining oligonucleotide #21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SHAN-) SHANGHAI BIOENGINEERING RES CENT CHINESE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 12 BP; 1 A; 8 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 8 (disclosure); 22pp; Chinese.
                                                                                                                                                                                                                                                    PCR primer for differential display #2.
                                                                                                                                   ABX14213 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABK70579 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-NOV-2000; 2000CN-00127496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-NOV-2000; 2000CN-00127496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ligand binding affinity; ss.
                                                                                                                                                                                                             25-FEB-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-JUL-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 52.5
Best Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wang Z;
GCCGCCATCG 15
                                                                                                                                                                                                                                                                                                                 expressed sequence tag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CGGCGGGCGG 10
                    10 GGCCGCATCG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11 CGGAGGGCGG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-751448/82.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kang J,
                                                                                                                                                                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                                                                           CN1354259-A
                                                                                                                                                                                                                                                                                                                                                                                                                                    19-JUN-2002
9
                                                                                                                                                                        ABX14213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABK70579;
```

Li R,

RESULT 339

8 a ABK70579,

2×2×2×2×

ö

Gaps

```
Multiplex detection; ss; spacer element; three dimensional capture probe.
                                                                                                                                                                                                                                                                                                                                                             New assay for determining relative binding affinities of a ligand to different oligonucleotide sequences is useful to determine nucleic acid binding specificities and base pair determinants of particularly ligands.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to methods for determining relative binding affinities of a ligand to different oligonucleotide sequences, using indicator oligonucleotide pairs having a signal and a signal-altering group attached in direct or competitive binding assays. The method is used to determine nucleic acid binding specificities and base pair determinants of particular ligands. The present sequence is a competitor oligonucleotide used to illustrate the method of the invention
                    Competitive binding assay; binding affinity; ligand; indicator;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sample preparation and multiplex detection apparatus DNA #7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 52.5%; Score 8.4; DB 1; Length 12; Best Local Similarity 90.0%; Pred. No. 2.2e+02; Matches 9; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 12 BP; 2 A; 7 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                        (GENE-) GENELABS TECHNOLOGIES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Col 12; 32pp; English.
                                                                                                                                                                                  98US-00151890.
                                                                                                                                                                                                                    98US-00151890.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12-MAR-2002; 2002US-00096718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-00217472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACA61747 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-AUG-2003 (first entry)
                                                                                                                                                                                                                                                                                            Schroth GP, Bruice TW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 GGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   m
                                                                                                                                                                                                                                                                                                                             WPI; 2002-626078/67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-466222/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12 GGCGGTATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (NANO-) NANOGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US2003032029-A1
                                       competitor; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-DEC-1998;
                                                                         Unidentified.
                                                                                                                                                                                  11-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unidentified.
                                                                                                                                                                                                                  11-SEP-1998;
                                                                                                           US6420109-B1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-FEB-2003.
                                                                                                                                              16-JUL-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Collins ML;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACA61747;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACA61747,
   ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is that of an oligonuclectide used in a template-
dependent ligation-based method of molecular beacon (MB) synthesis. In
this method, the MB is formed by ligation of 2 (or more)
oligonuclectides, which are aligned on a template coligonuclectide sinto
oligonuclectides, which are aligned on a template coligonuclectide into
proximity for the ligation reaction to occur. The first oligonuclectide
and the template can be batch synthesised, with only the second
that is specific for a target of interest, being custom made. Ligation is
coligonuclectide (present sequence), which includes the portion of the MB
col at specific for a target of interest, being custom made. Ligation is
performed using T4 ligase, Escherichia coli ligase, a thermostable ligase
or any other enzyme capable of ligating nicks in a double-stranded DNA
condecule. The final MB (see AAT70898) has a fluorophore at its 5' (or 3')
end and a quencher molecule at its 3' (or 5') end. In non-hybridised
form, the MB forms a hairpin loop structure in which the fluorescence and
genence or interest. Hybridisation forces dissociation of the MB stem,
distancing the fluorophore from the quencher, causing an increase in
fluorescence of the MB. The modular synthesis strategy overcomes previous
problems of scalability, purification and synthesis of MBs. The MBs can
comprise nucleic acids, peptide nucleic acids, or both. They are useful
for detecting a juxtaposation of two or more target subsequences
juxtaposad by RNA splicing, RNA splicing and reverse transcription,
ligation or PCR, in a target nucleic acid. Methods, devices, ligation
mixtures and libraries of MB components are provided for high-throughput
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                             Making molecular beacons for detecting juxtaposed nucleic acids, comprises ligating two oligonuclectides corresponding to the two subsequences of beacon and monitoring ligation-dependent change in signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52.5%; Score 8.4; DB 1; Length 12; ilarity 81.8%; Pred. No. 2.2e+02; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seguence 12 BP; 1 A; 4 C; 6 G; 0 T; 0 U; 1 Other;
 sequence of G, C, A or T bases"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Competitor oligo containing poly A/T tract #2.
                                                                       /note= "3' quencher"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthesis and ligation optimization
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Fig 9; 69pp; English.
                                   /*tag= d
/label= OTHER
                                                                                                                                                                                                                    28-APR-2000; 2000US-0200333P
                                                                                                                                                                                  27-APR-2001; 2001WO-US013719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAD45589 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-DEC-2002 (first entry)
                                                                                                                                                                                                                                                        (MONT-) MONTCLAIR GROUP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CGGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGACGNGCGGC 11
                                                                                                                                                                                                                                                                                            Mancebo R;
                                                                                                                                                                                                                                                                                                                             WPI; 2002-075171/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                      output of beacon
                                                                                                           WO200183820-A1
                  modified base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ..
6
                                                                                                                                                                                                                                                                                            Beckman KB,
                                                                                                                                              08-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAD45589;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAD45589,
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BXAXAXB
```

Gaps

ö

BP.

ΥJ;

Apparatus for carrying out sample preparation and detection of panels of target nucleic acids and antigens in a sample, has sample preparation zone, three dimensional capture probe platforms and spacer elements.

Example 1; Page 9; 41pp; English

The invention relates to an apparatus for carrying out sample preparation and multiplex detection of panels of target nucleic acids and antigens in a sample, comprising a sample preparation zone, several three dimensional capture probe platforms for capturing specific classes of target capture probe platforms for separating the sets of three dimensional capture probe platforms. The apparatus is useful for carrying out multiplex detection of panels of target nucleic acids and/or a sample, by providing a sample containing target nucleic acids and/or antigens of interest, treating the sample with a sample buffer to form a pre-processed sample, passing the pre-processes sample buffer to form a probes of the apparatus, reacting the passing the pre-processes of the apparatus, reacting a label with a signal probe that is probes of the apparatus, for at least one other signal probe that is specific for the target and detecting the reacted level. Sequences the scope of the invention

Sequence 12 BP; 4 A; 4 C; 3 G; 1 T; 0 U; 0 Other;

Gaps .; 0 52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels Query Match
Best Local Similarity 90.us, 15 10 GTCGCCATCG 1 6 GGCGGCATCG ઠે g

Sample preparation and multiplex detection apparatus DNA #27. ACA61767 standard; DNA; 12 ACA61767; RESULT 343 ACA61767

BP

20-AUG-2003 (first entry)

Multiplex detection; ss; spacer element; three dimensional capture probe.

Unidentified

US2003032029-A1.

13-FEB-2003

12-MAR-2002; 2002US-00096718.

98US-00217472 21-DEC-1998;

(NANO-) NANOGEN INC

Collins ML;

WPI; 2003-466222/44.

Apparatus for carrying out sample preparation and detection of panels of target nucleic acids and antigens in a sample, has sample preparation zone, three dimensional capture probe platforms and spacer elements.

Disclosure; Page 19; 41pp; English.

The invention relates to an apparatus for carrying out sample preparation and multiplex detection of panels of target nucleic acids and antigens in a sample, comprising a sample preparation zone, several three dimensional capture probe platforms for capturing specific classes of target molecules and spacer elements for separating the sets of three

```
dimensional capture probe platforms. The apparatus is useful for carrying out multiplex detection of panels of target nucleic acids and antigens in a sample, by providing a sample containing target nucleic acids and/or antigens of interest, treating the sample with a sample buffer to form a pre-processed sample, passing the pre-processes sample over the apparatus, capturing the target nucleic acids and antigens by capture probes of the apparatus, reacting a label with a signal probe the signal probe having specificity for at least one other signal probe that is specific for the target and detecting the reacted level. Sequences ACA61141-ACA61800 and ACD17023-ACD17041 represent DNA molecules used in
                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                         52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                          Sequence 12 BP; 1 A; 3 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                the scope of the invention
                                                                                                                                                                                                                                                                                                                                                                                         9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     6 GGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                         Matches
    ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
```

ABZ94944 standard; DNA; 12 BP. 17-OCT-2003 (first entry) ABZ94944; 344 ABZ94944

ö

Human adenosine Al receptor antisense fragment no.807.

Human; antisense; lung dysfunction; nasal airway dysfunction; antiinflammatory; antiallergic; antianflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.

Homo sapiens.

WO200285308-A2

31-OCT-2002.

23-APR-2002; 2002WO-US013135.

24-APR-2001; 2001US-0286137P.

(EPIG-) EPIGENESIS PHARM INC

Aguilar D; Pabalan J, Katz E, Li Y, Sandrasagra A, Tang L, Shahabuddin Nyce JW, I Miller S,

WPI; 2003-229219/22.

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or ubiquinone

Disclosure; SEQ ID NO 10186; 872pp; English.

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a

preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine, receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject s tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the princed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other; 88888888888888888

Gaps .; 0 52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; Indels 0; Mismatches Pred. No. 9; Conservative 6 GGCGGCATCG 15 10 1 GGCGGCATGG Query Match Best Local Similarity 셤 à

ö

ABZ94827 standard; DNA; 12 BP. (first entry) 17-0CT-2003 ABZ94827; RESULT 345

Human; antisense; lung dysfunction; nasal airway dysfunction; antinflammatory steroid; ubiquinone; antinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cyrostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. Human adenosine Al receptor antisense fragment no.690.

Homo sapiens.

WO200285308-A2.

31-OCT-2002

23-APR-2002; 2002WO-US013135.

24-APR-2001; 2001US-0286137P.

(EPIG-) EPIGENESIS PHARM INC.

Aguilar D; Pabalan J, Sandrasagra A, Katz E, L, Shahabuddin S; Tang L, Li Y, Nyce JW, I Miller S,

WPI; 2003-229219/22.

Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or

Disclosure; SEQ ID NO 10069; 872pp; English.

ubiquinone

The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonucleotide antisense to the initiation codon, coding region, 5 or 3 end genomic flanking regions, 5 and 3 intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a

ö preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of adenosine lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO for treating or Gaps ; 0 Score 8.4; DB 1; Length 12; Pred. No. 2.2e+02; 0; Mismatches 1; Indels The composition is useful Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other; at ftp.wipo.int/pub/published_pct_sequences in antisense gene therapy. 52.5%; Local Similarity 90.0 nes 9; Conservative Query Match Matches 8 \pm 8

GCCGGCCGC 11 12 GGAGGGCGGC ~ δ 셤

RESULT 346 ABD18675

BP. ABD18675 standard; DNA; 12 ABD18675;

29-JUL-2004 (first entry)

Human adenosine Al receptor oligonucleotide fragment 690.

respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds. antisense; bronchoconstriction; allergy; hyposecretion; pain;

Homo sapiens.

WO200285309-A2

31-OCT-2002.

23-APR-2002; 2002WO-US013143.

24-APR-2001; 2001US-0286036P.

(EPIG-) EPIGENESIS PHARM INC.

ä Aguilar Pabalan J, Katz E, s, Sandrasagra A, Li Y, Sar Tang L, Miller S, 3

WPI; 2003-093058/08.

ဌ Pharmaceutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted tnucleic acids associated with lung airway or lung dysfunction, and bronchodilating agent.

Claim 15; SEQ ID NO 10069; 763pp; English.

This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung

```
instructions for adding actrier, who muse of the kit. The composition of the invention has antialergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target many or reduce the amount of target polypeptide present in the lungs. The reduce the amount of target polypeptide present in the lungs are submanary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense olgoss corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonuclestides into products that free adenosine into the system
                                                                                                                                                                                                                                                                                                                                                                                                                                           lung, brain, heart, kidney, etc, tissue environment and thereby, to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    respiratory tract inflammation, adenosine sensitivity; lung; cancer; surfactant depletion, antiallergic; antinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
  dysfunction or cancer and can be anti-sense to the corresponding mRNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; antisense; bronchoconstriction; allergy; hyposecretion; pain;
                 The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Aguilar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human adenosine Al receptor oligonucleotide fragment 807.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 12 BP; 2 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Katz E,
S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sandrasagra A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABD18792 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-APR-2001; 2001US-0286036P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GGAGGGCGC 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4PI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Li Y, Sa
Tang L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200285309-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABD18792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABD18792
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        요
```

```
This invention describes a novel composition (a) a first active agent, comprising oligonuclectides, effective for alleviating comprising oligonuclectides, effective for alleviating conforcementation, and allergies and reducing adenosine sensitivity, levels of adenosine (A) or (A) receptors, curfactant depletion or hyposecretion, when administered to a mammal. The oligonuclectides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung dyfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonuclectides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a composition composition conforcement of the invention of the composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The composition, and/or surfactant hypoproduction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, and/or surfactant hypoproduction respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary disease, pulmonary of hypertension, emphysema, chronic obstructions, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis or cancer. The reduced adenosine content of the anti-sense oligon content the braakdown of the oligonucleotides into products that free adenosine into the system of the oligonucleotides into products that free adenosine experts and nearly and one of the content of the co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
acids associated with lung airway or lung dysfunction, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 8.4; DB 1; Length 12;
Pred. No. 2.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Suzuki K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 12 BP; 1 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kobayashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                              Claim 15; SEQ ID NO 10186; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein labelling method sequence #252.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         prevent any unwanted effects due to it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Shiratori M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUN-2004; 2004WO-JP008953.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MITU ) MITSUBISHI CHEM CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADW87050 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 90.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Naka D, Nakano H, Shi
Hashimoto H, Sasaki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6 GGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GGCGGCATGG 10
                      bronchodilating agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004113530-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-DEC-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADW87050;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADW87050
  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
```

labeling compound

```
Novel polynucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence of labeling compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel polynucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence of
                                                                                                                                                                The invention relates to a polynucleotide (1) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3' terminal of sequence encoding target protein of gene template, where labeling compound has label portion and acceptor portion having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (1) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, translating the gene template in the presence of the labeling compound containing acceptor portion and label portion, and obtaining protein system. The base sequence encoding the target protein and label the termination codon or contain the presence of the contain the presence of the protein and label portion.
                                                                                                                                                                                                                                                                                                                                                                                                                         the termination codon. The labeling compound is added after the initiation of the translation. The labeled protein (LPI) is useful in a performance-analysis of a protein, which involves contacting the test substance with (LPI), and analyzing the interaction between the protein and the test substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled protein. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 8.4; DB 1; Length 12;
Pred. No. 2.2e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Suzuki K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 12 BP; 0 A; 2 C; 10 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kobayashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein labelling method sequence #144.
                                                                                                                                Disclosure; Fig 21; 140pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shiratori M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADW86942 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-JUN-2004; 2004WO-JP008953.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MITU ) MITSUBISHI CHEM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-APR-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sasaki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2005-075248/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGCGGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 decedeced
                WPI; 2005-075248/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nakano H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004113530-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hashimoto H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADW86942;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Naka D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

ö

Gaps .. 0

```
The invention relates to a polynucleotide (I) for synthesizing labeled protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3' terminal of sequence encoding target protein of gene template, where labeling compound as label portion and acceptor portion having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3' terminal of base sequence encoding the target protein, translating the gene template in the presence of the labeling compound containing acceptor portion and label portion, and obtaining protein either renslation system. The base sequence encoding the target protein either contains the termination codon or does not contain the termination codon. The labeling compound is added after the initiation of the translation. The labeling compound is added after the substance with (LPI), and analyzing the interaction between the protein substance. (I) has the ability to increase labeling efficiency of a labeling compound and thus effectively produces labeled protein. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel polymucleotide having ability to increase labeling efficiency of labeling compound, useful for synthesizing labeled protein in presence of labeling compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a polynucleotide (I) for synthesizing labeled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 8.4; DB 1; Length 12;
Pred. No. 2.2e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   χ
;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Suzuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA purification; protein engineering; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seguence 12 BP; 0 A; 2 C; 10 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kobayashi T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein labelling method sequence #146.
                                Disclosure; Fig 20; 140pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Fig 20; 140pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nakano H, Shiratori M, SH, Sasaki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADW86944 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JUN-2004; 2004WO-JP008953.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JUN-2003; 2003JP-00173634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (MITU ) MITSUBISHI CHEM CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-APR-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best_Local Similarity 90.0
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GGCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2005-075248/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99999999999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO2004113530-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                      the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hashimoto H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-DEC-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADW86944;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Naka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADW86944
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
```

Disclosure; SEQ ID NO 882; 1290pp; Japanese.

```
protein and having ability to increase labeling efficiency of labeling compound, where protein is produced by adding labeling compound to 3, terminal of sequence encoding target protein of gene template, where labeling compound has label portion and acceptor portion having compound capable of binding to C-terminus of label portion and translating gene template in presence of labeled compound. (I) is useful for producing a labeling protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein, which involves preparing a gene template by adding (I) to the 3'-terminal of base sequence encoding the target protein and label portion, and obtaining protein synthesized in the translation and label portion, and obtaining protein synthesized in the translation and label portion, and obtaining protein the termination codon. The labeling compound is added after the initiation of the translation. The labeled protein (LPI) is useful in a pubstance malysis of a protein, which involves contexting the test substance with (LPI), and analysing the interaction between the protein and the test substance. (I) has the ability to increase labeling employed protein prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 officiency of a labeling compound and thus effectively produces labeled protein. This sequence corresponds to a sequence used in the method of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Analyzing haplotype, by detecting polymorphism in drug-related genes, electing common polymorphism (CP), building haplotype block using CP, specifying CP within block, specifying tag polymorphism from CP within
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ss; haplotype mapping; SNP detection; tumor; cytostatic; neoplasm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             immune disorder; cardiovascular disease; metabolic disorder; respiratory disease; musculoskeletal disease; renal disease; nephrotropic; endocrine disease; genitourinary disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nakamura Y, Kamatani N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 12 BP; 0 A; 2 C; 10 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human SNP detection related oligonucelotide #882.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADZ23915/c
ID ADZ23915 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Saito S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-SEP-2003; 2003JP-00342519.
28-MAY-2004; 2004JP-00158717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-SEP-2004; 2004WO-JP014784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-JUN-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CGGCGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ceeceeeee 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (RIKE ) RIKEN KK.
(STAG-) STAGEN CO LTD.
(SEKI/) SEKINE A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2005-305936/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sekine A, Iida A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (IIDA/) IIDA A.
(SAIT/) SAITO S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2005030952-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADZ23915;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
             $$$$$$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
```

```
The invention relates to a method of analyzing haplotype, by detecting gene polymorphism in drug-related genes such as aryl acetylamine arylalkylamine N-acetyl transferace or ATP-binding cassette, and acetylase, arylalkylamine N-acetyl transferace or ATP-binding cassette, sub-family A (ABC1), member 1. The method is useful for analyzing cassette, sub-family A (ABC1), member 1. The method is useful for analyzing considering nations or a foreign material, for selecting medicine for preventing or treating disease, for analyzing a drug considered for preventing or treating a disease, for analyzing a drug cassitivity of the medicine, foreign material or disease. The diseases conclude malignant tumor, immune disease and muscle associated disease. The method enables analysis of the individual differences related to the sensitivity of a medicine, using a haplotype, without using each single nucleotide polymorphism. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Analyzing haplotype, by detecting polymorphism in drug-related genes, electing common polymorphism (CP), building haplotype block using CP, specifying CP within block, specifying tag polymorphism from CP within
                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  se; haplotype mapping; SNP detection; tumor; cytostatic; neoplasm; immune disorder; cardiovascular disease; metabolic disorder; respiratory disease; musculoskeletal disease; renal disease; nephrotropic; endocrine disease; genitourinary disease.
                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                Score 8.4; DB 1; Length 12;
Pred. No. 2.2e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kamatani
                                                                                                                                                                                                                                                                                                                 Sequence 12 BP; 1 A; 5 C; 4 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human SNP detection related oligonucelotide #878.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; SEQ ID NO 878; 1290pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sekine A, Iida A, Saito S, Nakamura Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
                                                                                                                                                                                                                                                                                                                                                  52.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-SEP-2004; 2004WO-JP014784.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-SEP-2003; 2003JP-00342519.
28-MAY-2004; 2004JP-00158717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADZ23911 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-JUN-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                 Ouery Match
Best Local Similarity 90.0-
                                                                                                                                                                                                                                                                                                                                                                                                                      4 CGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                   11 CGGCCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2005-305936/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (RIKE ) RIKEN KK.
(STAG-) STAGEN CO :
(SEKI/) SEKINE A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2005030952-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (IIDA/) IIDA A.
(SAIT/) SAITO S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-APR-2005.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADZ23911;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADZ23911/c
d
                                                                                                                                                                                                                                                                                                                                                                                                                      ઠ
```

: : :

ngs20.res

```
ö
           gene polymorphism in drug-related genes such as aryl acetylanide deacetylase, arylalkylamine N-acetyl transferase or ATP-binding cassette, sub-family A (ABC1), member 1. The method is useful for analyzing haplotype. The method is useful for selecting medicine for analyzing cf a medicine or a foreign material, for selecting medicine for preventing or treating diseases, for determining appropriate dosage of medicine for preventing or treating or treating a disease, for analyzing a drug interaction, and for determining the related polymorphism relative to the sensitivity of the medicine, foreign material or disease. The diseases include malignant tumor, immune disorder circulatory disease, metabolic disease, kidney disease, respiratory disease and muscle associated disease. The method enables analysis of the individual differences related to the sensitivity of a medicine, using a haplotype, without using each single nucleotide polymorphism. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86; siRNA; short interfering RNA; RNA interference; gene silencing; VEGF;
pharmaceutical; cancer; neoplasm; Cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New multifunctional siNA molecule that directs cleavage of the first and second VEGF or VEGFR target sequences via RNA interference, useful in preparing a composition for treating cell proliferative disorders e.g.
     by detecting
                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                            Length 12;
The invention relates to a method of analyzing haplotype,
                                                                                                                                                                                                                                            represents a human SNP detection related oligonucelotide.
                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mcswiggen J;
                                                                                                                                                                                                                                                                            Sequence 12 BP; 1 A; 5 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                            Score 8.4; DB 1;
Pred. No. 2.2e+02;
                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vaish N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zinnen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2003US-00720448

2003US-00727780

2004US-00757803

2004US-00764957

2004US-00780447

2004US-00816266

2004US-00831620

2004US-00831620

2004US-00831620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (SIRN-) SIRNA THERAPEUTICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADY89227 standard; RNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2003US-00665255.
2003US-00670011.
                                                                                                                                                                                                                                                                                                            52.5%;
90.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-SEP-2004; 2004WO-US030488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2003US-00693059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2004US-00844076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VEGF SIRNA SEQ ID NO 2263.
                                                                                                                                                                                                                                                                                                                                            9; Conservative
                                                                                                                                                                                                                                                                                                                                                                       4 CGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                        ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jadhav V, Kossen K,
                                                                                                                                                                                                                                                                                                                                                                                                          11 CGGCCCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2005-254128/26.
                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2005028649-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-SEP-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-OCT-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-NOV-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-DEC-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-JAN-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-FEB-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-APR-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16-SEP-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11-MAY-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADY89227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 353
                                                                                                                                                                                                                                                                                                                                            Matches
 88888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ઠે
```

```
The present invention relates to a method for multiplex detection of target molecules in a sample. The method comprises passing the sample cover an apparatus comprising at least one sample preparation layer, labeling the captured target molecules with a light emitting labeling entity, and detecting the light emitted to detect the presence of captured target molecules. The method is useful for integrating sample preparation and multiplex assay of high volume samples for the presence of mucheic acid and antigen targets, and for carrying out fully integrated clinical diagnostics, combining sample preparation, nucleic cid hybridization reactions and antibody/antigen reactions. The sample is contacted with a number of mediator probes prior to passing through the apparatus, and is contacted with a label mediator probe that specifically binds the target molecule, a preamplifier molecule that specifically binds the label mediator probe, at least one amplifier molecule that specifically binds the preamplifier probe, a label probe
                                                                                                                                                                                                                                                                                            ..
0
                                                                     The invention relates to a multifunctional siNA molecule comprising a structure having Formula MF-III and which directs cleavage of the first and second VEGF or VEGFR target sequences via RNA interference. The multifunctional siNA molecule is useful in preparing a pharmaceutical composition for treating cell proliferative disorders, e.g. cancer. The present sequence represents a VEGF siRNA.
                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Multiplex assay of target molecules by passing the sample over an apparatus having at least one sample preparation layer, useful for carrying out integrated clinical diagnostics and nucleic acid
                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA detection; RNA detection; peptide nucleic acid; PNA; ss.
                                                                                                                                                                                                                                                   52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                              Sequence 12 BP; 0 A; 4 C; 8 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide nucleic acid oligonucleotide, SEQ ID 7.
                                  Disclosure; SEQ ID NO 2263; 396pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; SEQ ID NO 7; 37pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-SEP-2004; 2004US-00944920.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-00217472.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12-MAR-2002; 2002US-00096718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AEB43971 standard; DNA; 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-SEP-2005 (first entry)
                                                                                                                                                                                                                                                                                            9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hybridization reactions.
                                                                                                                                                                                                                                                                                                                                2 GGCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                       GCCCGCCGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2005-540030/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (NANO-) NANOGEN INC.
                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US2005136442-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-JUN-2005.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Collins ML;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AEB43971;
                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AEB43971
ò
                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
The present invention relates to a method for multiplex detection of target molecules in a sample. The method comprises passing the sample over an appearatus comprising at least one sample preparation layer, labeling the captured target molecules with a light emitting labeling entity, and detecting the light emitted to detect the presence of captured target molecules. The method is useful for integrating sample preparation and multiplex assay of high volume samples for the presence of integrated clinical diagnostics, combining sample preparation, nucleic acid hybridization reactions and antibody/antigen reactions. The sample is contacted with a number of mediator probes prior to passing through the apparatus, and is contacted with a label mediator probe that specifically binds the target molecule, a preamplifier molecule that specifically binds the label mediator probe, at least one amplifier molecule that specifically binds the beam mediator probe, at least one amplifier molecule that specifically binds the preamplifier, and a label that specifically binds the breamplifier, and a label that specifically binds the preamplifier, and a label that specifically binds the breamplifier, and a label that specifically binds the label mediator, and a label that specifically binds the label mediator, and a label that specifically binds the label probe and that emits light. The target molecules are nucleic acids, antigens or antibodies, and/or a bacterial target molecule
                                                                                                                                                                                                                                                                   ö
that specifically binds the preamplifier, and a label that specifically binds the label probe and that emits light. The target molecules are nucleic acids, antigens or antibodies, and/or a bacterial target molecule or a viral target molecule. AEBA19865-AEBA1984 are peptide nucleic acid sequences (PNA) which contains four lysine residues, and AEBA1985-
                                                                                                         AEB44004 are the DNA complement sequences for the PNAs, which were used
                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Multiplex assay of target molecules by passing the sample over apparatus having at least one sample preparation layer, useful carrying out integrated clinical diagnostics and nucleic acid
                                                                                                                                                                                                                    52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02;
                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                            Sequence 12 BP; 4 A; 4 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; SEQ ID NO 27; 37pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA detection; RNA detection; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AEB43991 standard; DNA; 12 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-SEP-2004; 2004US-00944920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-DEC-1998; 98US-00217472,
12-MAR-2002; 2002US-00096718,
                                                                                                                               to illustrate the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oligonucleotide, SEQ ID 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                              Query Match
Best Local Similarity 90...
Pest Some 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hybridization reactions.
                                                                                                                                                                                                                                                                                                         6 GGCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                    GTCGGCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2005-540030/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (NANO-) NANOGEN INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US2005136442-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-SEP-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Collins ML;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AEB43991;
                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 355
                                                                                                                                                                                                                                                                                                                                                                                                                                      AEB43991
    8888888888888
                                                                                                                                                                                                                                                                                                         ઠ
                                                                                                                                                                                                                                                                                                                                               g
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         developing products to determine p53 strue, to diagnose cancer and to developing products to determine p53 strue, to diagnose cancer and to diagnosing cancer or determiningenicity of a test agent. A method for being neoplastic comprises comparing the level of transcription of an RNA transcription of the transcription of a first tissue (t1) to the level of transcription of the same type) and the transcript is identified by a tag is an a sample second sample (s2), where all is suspected of being neoplastic and s2 is a normal human tissue (of the same type) and the transcript is identified by a tag is an adaption of some type) and the transcript is identified by a tag transcription is found to be the same or lower in the first, than in s2. The methods and products can be used to determine p53 status, to diagnose cancer and to evaluate cytotoxicity or carcinogenicity of a test agent.

AAX86201-31 represent SAGE tags used to identify transcripts which are enhanced by p53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               p53 transcription tag; p53 status; cancer; cytotoxicity; carcinogenicity;
neoplastic; p53 binding site; PIG-3 promoter; SAGE tag; ss.
or a viral target molecule. AEB43965-AEB43984 are peptide nucleic acid sequences (PNA) which contains four lysine residues, and AEB43985-AEB44004 are the DNA complement sequences for the PNAs, which were used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Use of p53 transcription tags to determine p53 status in, e.g. cancer
                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The specification describes the use of p53 transcription tags for
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAGE tag used to identify transcripts which are enhanced by p53.
                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                               52.5%; Score 8.4; DB 1; Length 12; 90.0%; Pred. No. 2.2e+02; ive 0; Mismatches 1; Indele
                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 10;
                                                                                          Sequence 12 BP; 1 A; 3 C; 4 G; 4 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10 BP; 1 A; 6 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 100.0%; Score 8; DB 1; Le:
Similarity 100.0%; Pred. No. 2.1a+02;
8; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ϋ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vogelstein B, Kinzler KW, Polyak
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; Page 26; 73pp; English.
                                                                                                                                                                                                                                                                                                                                            AAX86209 standard; DNA; 10 BP.
                                                          to illustrate the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-US019300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97US-0059153P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0079817P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYJO ) UNIV JOHNS HOPKINS,
                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                     9; Conservative
                                                                                                                                                                                                            6 GCCGCCATCG 15
                                                                                                                                                                                                                                 WPI; 1999-443793/37
                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9914356-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .7-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                    22-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                 AAX86209;
                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                    RESULT 350
AAX86209/0
 8888888
                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                            ઠ
```

```
ò
                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                               Isolated polynucleotides differentially expressed in antigen-presenting
                                                                                                   SAGE tag; serial analysis of gene expression; antigen-presenting cell; APC; moncoyte-derived dendritic cell; differential gene expression; immunostimulatory cofactor; costimulatory factor; CTL; cytotoxic T-lymphocyte; tumour antigen; immunotherapy; anticancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequences AAZ77573-Z79709 represent SAGE (serial analysis of gene expression) tags used to identify mRNA transcripts encoding
                                                                                       Human dendritic cell SAGE tag, SEQ ID NO:1653.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cells, useful in gene vaccines against cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 112; 130pp; English
                                                                                                                                                                                                                                                                                 98US - 0090039P
98US - 0090040P
98US - 0090041P
98US - 0090043P
98US - 0090044P
98US - 0090045P
98US - 0090045P
98US - 0090047P
                                              AAZ79225 standard; DNA; 10 BP.
                                                                                                                                                                                          98US-008983P.
98US-0089844P.
98US-0089853P.
98US-0089878P.
98US-0089991P.
                                                                                                                                                                                                                                   98US-0089993P.
98US-0089994P.
98US-0089997P.
                                                                                                                                                                                                                                                       98US-0089999P.
98US-0090000P.
98US-0090035P.
                                                                                                                                                                                                                                                                                                                                                            98US-0090077P.
98US-0090078P.
98US-0090079P.
98US-0090080P.
                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                 Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                     (GENZ ) GENZYME CORP. (ROBE/) ROBERTS B L.
                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-106077/09.
                                                                                                                                                                                                                                                                                                                                                                                                                  SHANKARA S.
                                                                                                                                      Homo sapiens
                                                                                                                                                   WO9965924-A2
                                                                                                                                                                                                                                   19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                               19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                              18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                Roberts BL,
                                                                         10-APR-2000
                                                                                                                                                                                                                                                                                   19-7UN-1998;
                                                                                                                                                                                                                                                                                                                    19-10N-1998
                                                                                                                                                               23-DEC-1999
                                                                                                                                                                                                                                                        .9-JUN-1998
                                                                                                                                                                                                                                                                                                19-JUN-1998
                                                                                                                                                                                                                                                                                                       9-JUN-1998
                                                                                                                                                                                                                                                                                                              .9-JUN-1998
                                                                                                                                                                                                                                                                                                                                  9-JUN-1998
                                                                                                                                                                                                                                                                                                                                          .9-JUN-1998
                                                                                                                                                                                                                                                                                                                                                19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                      .9-JUN-1998
                                                                                                                                                                                                                                                                                                                                                              19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                           .9-JUN-1998
                                                           AAZ79225;
                                                                                                                                                                                                                                                                                                                                                                                                                  SHAN/)
                                 RESULT 357
```

immunostimulatory cofactor proteins which are preferentially or differentially expressed in monocyte-derived dendritic cells compared with monocytes. Some of the transcripts correspond to known genes or ESTs (expressed sequence tags) which were previously unknown to be preferentially or differentially expressed in dendritic cells, while preferentially or differentially expressed in dendritic cells, while cother transcripts correspond to novel genes. Antigen-presenting cell (APC)-associated costimulatory factors play an important role in the activation of the cytotoxic immune response, particularly against tumour cells. Tumour antigen presentation via the WHC (major histocompatibility complex) and subsequent recognition by T-cell receptors is alone insufficient to activate a robust cytotoxic immune response that can lyse the tumour cells, immunostimulatory cofactors also being required for cefficient activation of cytotoxic T-lymphocytes (CTBs). Nucleic caid sequences identified using the SAGE tags have several potential uses. They may be used in vaccines to induce an immune response, particularly sequences identified using the SAGE tags have several potential uses. They may be used in vaccines to induce an immune response, particularly compained as hybridisation probes/amplification primers for the an APC; and as hybridisation probes/amplification primers for the diagnosis, prognosis and monitoring of diseases related to abnormal expressed genes, or of their encoded proteins, can be used in active immunotherapy (or to stimulate production of a copulation of antigen-specific effector cells) and vectors containing these can be used in gene therapy. Co-administration of tumour antigens and presentation of co-stimulatory signals, migration of chemokines for the presentation of co-stimulatory signals, migration of chemokines for recruitment of immune effector cells and secretion of recliminate and secretion of recliminate production of co-stimulatory signals, migration of cells containing recovery. ö SAGE tag; serial analysis of gene expression; antigen-presenting cell; APC; moncoyte-derived dendritic cell; differential gene expression; immunostimulatory cofactor; costimulatory factor; CTL; cytocoxic T-lymphocyte; tumnor antigen; immunotherapy; anticancer; ss. Gaps ; 0; Indels Length 10; Sequence 10 BP; 1 A; 2 C; 4 G; 3 T; 0 U; 0 Other; 50.0%; Score 8; DB 1; Le: 100.0%; Pred. No. 2.1e+02; ative 0; Mismatches 0; Human dendritic cell SAGE tag, SEQ ID NO:1242. recruitment of immune effector cells 98US-0089844P. 98US-0089853P. 98US-008991P. 98US-0089992P. 98US-0089992P. AAZ78814 standard; DNA; 10 BP. 99WO-US013800. 98US-0089833P 10-APR-2000 (first entry) Local Similarity 100. Les 8; Conservative 9 GGCATCGT 16 1 GGCATCGT 8 19-JUN-1998; 19-JUN-1998; 19-JUN-1998; Homo sapiens WO9965924-A2 19-JUN-1998; 19-JUN-1998; 19-JUN-1998; 19-JUN-1998; 18-JUN-1999; 23-DEC-1999. AAZ78814; Query Match Matches

```
Sequences AAXT/7/3/2/19/109 represent SAGE (serrial analysis of gene expression) tags used to identify mRNA transcripts encoding immunostimulatory cofactor proteins which are preferentially or differentially expressed in monocyte-derived dendritic cells compared with monocytes. Some of the transcripts correspond to known genes or ESTS (expressed sequence tags) which were previously unknown to be preferentially or differentially expressed in dendritic cells, while other transcripts correspond to novel genes. Antiquenter role in the activation of the cytotoxic immune response. Antiquentarly against tumour cells. Tumour antigen presentation via the MHC (major histocompatibility complex) and subsequent recognition by T-cell receptors is alone calls, ranscripts presentation via the MHC (major histocompatibility complex) and subsequent recognition by T-cell receptors is alone the tumour cells, immunostimulatory cofactors alone being required for sequences identified using the SAGE tags have several potential uses. They may be used in vaccines to induce an immune response, particularly espense that modulate expression of differentially expressed genes in a APC; and as Mybridisation probes/amplification primers for the diagnosis, prognosis and monitoring of diseases related to abnormal expression of these genes. Detection of the dendritic cell differentially expressed genes in active immunotherapy (or to stimulate production of a cells as belonging to the monocyce lineage. Cells containing these genes population of antigen specific effector cells) and vectors containing them are used in gene therapy. Co-administration of tumour antigens and population of antigen-specific effector estimulatory signals, migration of cells in active immunotherapy (or to stimulate antigen of population of co-stimulatory signals, migration of cells in cells and upragulates the APC for the recruitment of immine a fearer and secured or cells and estimulatory signals, migration of cells in the constimulatory signals, migration of cells in cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isolated polynucleotides differentially expressed in antigen-presenting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequences AAZ77573-Z79709 represent SAGE (serial analysis of gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cells, useful in gene vaccines against cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       secretion of T cell growth factors ar
recruitment of immune effector cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 100; 130pp; English
                                                                                           98US-0090039P.
98US-0090041P.
98US-0090041P.
98US-0090043P.
98US-0090044P.
98US-0090044P.
98US-0090047P.
98US-0090047P.
                                     98US-00900000P.
98US-0090035P.
98US-0090036P.
                                                                                                                                                                                                                                                                                                                                                                98US-0090080P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                           GENZYME CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                             ROBERTS B L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-106077/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SHAN/) SHANKARA S.
                                                                                                                                                                                                                             19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                           19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                  19-JUN-1998;
                                                                                                                                                                                        19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                    38-DEC-1998;
                                                         -JUN-1998
                                                                         19-JUN-1998
                                                                                                                                                                                                                                                                                       19-JUN-1998
                                                                                                                                                                                                                                                                                                          19-JUN-1998
                                                                                                                                                                                                                                                                                                                          19-JUN-1998
                                                                                                                                                                                                                                                                                                                                              19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                       (GENZ )
(ROBE/)
```

ö 0; Gaps 50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; ive 0; Mismatches 0; Indels Best Local Similarity 100.0%; Matches 8; Conservative 0 Query Match

```
Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                 Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; ss.
                                                                                                Metastatic breast tumour cell downregulated transcript tag #4933.
                                                    AAZ85699 standard; DNA; 10 BP.
                                                                                                                                                                                                                    98US-0089997P.
98US-0090039P.
98US-0090040P.
98US-0090041P.
                                                                                                                                                                                               99WO-US013647
                                                                                  (first entry)
                                                                                                                                                                                                                                                                                         BL, Shankara S;
                                                                                                                                                                                                                                                          GENZYME CORP. ROBERTS B L.
             Gecedece 10
6 90999099
                                                                                                                                                                                                                                                                                                       WPI; 2000-106079/09.
                                                                                                                                                                                                                                                                         (SHAN/) SHANKARA S.
                                                                                                                                                 Homo sapiens
                                                                                                                                                               W09965928-A2
                                                                                  07-APR-2000
                                                                                                                                                                                              18-JUN-1999;
                                                                                                                                                                                                             .9-JUN-1998;
                                                                                                                                                                                                                    19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                              23-DEC-1999.
                                                                                                                                                                                                                                           19-JUN-1998
                                                                   AAZ85699;
N
                                                                                                                                                                                                                                                          (GENZ ) (
(ROBE/) 1
                                                                                                                                                                                                                                                                                          Roberts
                                            AAZ85699,
ઠ
             a
```

that are preferentially transcribed in the metastatic breast tumour that are preferentially transcribed in the metastatic breast tumour cells). AAZ83942 to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in metastatic breast tumour cells). AAZ83942 to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells. These transcripts can be used for diagnosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and treatment of breast cancer, particularly where metastatic. Diagnosis is by standard immunoassays or hybridisation/amplification reactions. Compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of cell tharactipis are used to direct expression, in selected cell types, of particularly an antigen-encoding sequence for use in gene or cell-based vaccines; for diagnosing breast cancer and for raising specific cantibodies (Ab). Ab are used to detect the polypeptides or as therapeutic and isolate populations of educated, antigen-specific immune effecter cells, that produce the polypeptides can be used to expand and isolate populations of educated, antigen-specific immune effecter cells, cells, cells, and these used for adoptive

Claim 1; Page 190; 219pp; English.

treatment of cancer.

Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;

Query Match

50.0%; Score 8; DB 1; Length 10;

ö

```
that are preferentially transcribed in the metastatic breast tumour tissue (i.e. are upregulated in metastatic breast tumour cells). AAZ83342 to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). These preferentially transcribed in the primary or non-metastatic breast tumour cells). These transcripts can be used for diagnosis, monitoring and transcripts can be used for diagnosis, monitoring and transcripts can be used for diagnosis, monitoring and transcripts can be used to hybridisation/amplification reactions. Owngounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. therapeutic genes (also ribozymes or antisense sequences), particularly an antisense encoded by the transcripts are also useful in vaccines; for diagnosing breast cancer and for raising specific antibodies (Ab). Ab are used to detect the polypeptides or as therapeutic and isolate populations of educated, and isolate populations of educated, and these used for adoptive cannot be used to expand and isolate populations of educated, and these used for adoptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                   Gaps
                                                                                                                                                                                                                                                                                                 Human, metastatic breast tumour tissue, breast cancer, tag, primer, non-metastatic breast tumour tissue, gene therapy, anticancer, antimetastatic, vaccine, diagnosis, ss.
                 ö
                                                                                                                                                                                                                                                                 Metastatic breast tumour cell upregulated transcript tag #2042.
                 Indels
                 ö
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 114; 219pp; English.
                                                                                                                                                                  AAZ82808 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0089997P.
98US-0090039P.
98US-0090040P.
98US-0090041P.
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0089853P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US013647
                                                                                                                                                                                                                                  07-APR-2000 (first entry)
                 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENZYME CORP. ROBERTS B L.
                                                4 CGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-106079/09.
                                                                                CCCCCCC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SHANKARA S.
 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   umunotherapy
                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                      WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BĽ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                     23-DEC-1999
                                                                                                                                                                                                   AAZ82808;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GENZ ) (ROBE/)
 Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SHAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Roberts
                                                                                                                                  RESULT 360
                 Matches
                                                                                                                                                                                 ò
                                                                                d
```

Seguence 10 BP; 1 A; 6 C; 3 G; 0 T; 0 U; 0 Other;

```
that are preferentially transcribed in the metastatic breast tumour cells that are preferentially transcribed in the metastatic breast tumour cells). AAZ86071 tepresent tags corresponding to distinct transcripts that are preferentially transcribed in metastatic breast tumour cells). AAZ86577 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). These crissue (i.e. are downregulated in metastatic breast tumour cells). These transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and creatment of breast cancer, particularly where metastatic. Diagnosis is compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. therapeutic genes (also ribozymes or antisense sequences).

Compounds Polypeptides encoded by the transcripts are also useful in vaccines; for diagnosing breast cancer and for raising specific antibodies (Ab). Ab are used to detect the polypeptides or as therapeutic agents. Host cells that produce the polypeptides can be used to expand and isolate populations of educated, antigen-specific immune effecter cells, e.g. cytotoxic T lymphocytes, and these used for adoptive immunotherapy
                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                          Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                         Metastatic breast tumour cell downregulated transcript tag #3724.
                                                      ö
                                                    0; Indels
                  Length 10;
                                     2.1e+02;
                  DB 1;
                50.0%; Score 8; DB 1
100.0%; Pred. No. 2.1
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 158; 219pp; English.
                                                                                                                                                                                                                 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-US013647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0089853P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0089997P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0090040P.
Query Match
Best Local Similarity 100.vv
Thes 8; Conservative
                                                                                                                                                                                                                 AAZ84490 standard; DNA; 10
                                                                                                                                                                                                                                                                                       07-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GENZ ) GENZYME CORP. (ROBE/) ROBERTS B L.
                                                                                        8
                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-106079/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (SHAN/) SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-01-NUL-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JUN-1998
                                                                                                                                                                                                                                                     AAZ84490;
                                                                                                                                                                                RESULT 361
                                                                                                                                                                                                  AAZ84490
                                                                                                                                                                                                                                                     ਨੇ
                                                                                                                       셤
```

X S

RESULT 362

ઠે g AAH63789

XXXX

```
The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                         New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular
                                                                           Human; transcriptome; gene expression pattern; cancer; drug screening; cancer diagnosis; cell specific gene expression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transcriptome; gene expression pattern; cancer; drug screening; diagnosis; cell specific gene expression; ss.
                                     Human ubiquitously expressed transcriptome sequence SEQ ID NO: 628.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human ubiquitously expressed transcriptome sequence SEQ ID NO: 630.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                 Kinzler KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 13; Page 53; 94pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAH63790 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                               Velculescu VE, Vogelstein B,
                                                                                                                                                                                                                                                  21-NOV-2000; 2000WO-US031922
                                                                                                                                                                                                                                                                                      99US-00448480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-00448480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-NOV-2000; 2000WO-US031922
                                                                                                                                                                                                                                                                                                                          (UYJO) UNIV JOHNS HOPKINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYJO ) UNIV JOHNS HOPKINS.
20-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-367706/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                    WO200138577-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200138577-A2
                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                      24-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-NOV-1999;
                                                                                                                                                                                                          31-MAY-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cell types.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAH63790;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                         Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human;
cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 364
AAH63790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                     cancer; drug screening;
                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated polynucleotides, useful for identifying specific cell tyl
such as cancer cell, comprises transcriptomes expressed in particular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                           Human ubiquitously expressed transcriptome sequence SEQ ID NO: 629.
                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50.0%; Score 8; DB 1; Length 10;
100.0%; Pred. No. 2.1e+02;
iive 0; Mismatches 0; Indels
                                             Query Match 50.0%; Score 8; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 2.1e+02; Matches 8; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                 transcriptome; gene expression pattern; cance diagnosis; cell specific gene expression; ss.
         Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kinzler KW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 13; Page 53; 94pp; English.
                                                                                                                                                                                                                                                            AAH63789 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH63788 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-NOV-2000; 2000WO-US031922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-00448480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYJO ) UNIV JOHNS HOPKINS
                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8; Conservative
                                                                                                                                             3 GGGGGGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-367706/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GCCGGCCG 10
                                                                                                                           2 GGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GGCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200138577-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Velculescu VE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                     20-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cell types.
                                                                                                                                                                                                                                                                                                  AAH63789;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAH63788
                                                                                                                                                                                                                                                                                                                                                                                                                                   cancer
```

等级 机

RESULT 363

a ð

AAH63788 ID AAH6 XX AC AAH6 XX

ö

Gaps

.. 0

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a human normal hepatocyte expression gene group comprising 200 genes in the human normal hepatocyte. The CDNA of each gene comprises one of 200 fully defined nucleotide sequences as given in the specification. The group and the cDNAs corresponding to each of the genes in the group are useful in the diagnosis and treatment of human hepatopathy. The present sequence is a cDNA corresponding to a gene
                                                                                                                                                                                The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                 New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human normal hepatocyte expression gene cDNA, SEQ ID NO: 193.
                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 10; . 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hepatocyte; gene expression; hepatopathy; ss.
                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human normal hepatocyte expression gene group
                                                                                                                                                                                                                                                                                                                                                                         50.0%; Score 8; DB 1
100.0%; Pred. No. 2.1
iive 0; Mismatches
               Kinzler KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               expressed by normal human hepatocytes
                                                                                                                                                    Claim 13; Page 53; 94pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 9; 26pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                 Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-JAN-2000; 2000JP-00023170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-JAN-2000; 2000JP-00023170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABA06216 standard; cDNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                            8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GGCGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                              ò٧
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-629566/73
                                               WPI; 2001-367706/38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                              2 gecegece
              Velculescu VE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JP2001211883-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-AUG-2001
                                                                                                                    cell types.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABA06216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human;
                                                                                                                                                                                                                                                                                                                                                                                            Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

```
The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previously assigned open reading frame; or nonamotated ORP) genes comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (MI) of using NORF genes to affect the cell cycle comprising administering a NORF gene whose expression varies by at cell state 10% between any two phases of the cell cycle selected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate continuagal drugs comprising: (a) contacting a test substance which sees expression of antifungal drugs comprising (a) contacting a test substance which modifies the expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human genes which are involved in cell cycle progression of comprising contacting human DNA with a probe which comprises at least 10 contiguous nucleotides of a NORF gene whose expression varies as in M1; cand (4) a method (M4) for identifying the expression in a condidate drug as a member of contiguous nucleotides of a NORF gene whose expression is affected by the class of drugs. The NORF genes may be used contacting a yeast cell with a candidate drug and controring expression in the yeast cell of at least 1 NORF genes may be used to identify candidate drugs which affect the cell cycle and for identification of phases of the cell cycle the class of cycle and for identification of antifungal drugs. AAF3326 to AAF33267 represent linkers and PCR primers used in the SAGE content of the present invention.
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.
Gaps
                                                                                                                                                                                                                                                                                                                  nor previously assigned open reading frame; nonannotated ORF; SAGE; serial analysis of gene expression; antifungal; tag; identification; linker; PCR primer; ds.
ö
Indels
                                                                                                                                                                                                                                                                                Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:5905.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10 BP; 3 A; 4 C; 2 G; 1 T; 0 U; 0 Other;
ö
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kinzler K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example; Page 210; 419pp; English.
ö
                                                                                                                                                                    AAF39166 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-JUN-2000; 2000WO-US016223.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-00335032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYJO ) UNIV JOHNS HOPKINS
                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                    Saccharomyces cerevisiae.
 Conservative
                                                                        GCCGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-061874/07.
                                     6 52555255
                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200077214-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Velculescu V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-JUN-1999;
                                                                                                                                                                                                                                               23-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-DEC-2000
 .,
8
                                                                                                                                                                                                          AAF39166;
                                     ~
                                                                                                                                   RESULT 366
 Matches
                                                                                                                                                                                      ò
                                                                    g
```

Wed May 10 10:49:51 2006

```
(first entry)
                                                                              WO200218656-A2
                                                             Homo sapiens.
    03-JUL-2002
                                                                                                 07-MAR-2002
                                                                                                                                                                              Weller DD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapie
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABQ71300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention provides a male tissue-preferred regulatory region (I) comprising nucleotide sequences essential for initiating transcription of the MS45 gene. A method of mediating male fertility in a plant is provided that involves introducing an expression vector comprising a promoter operably linked to (I) into a plant where the exogenous gene impacts male fertility of the plant and (I) controls expression of the exogenous gene. A method of producing hybrid seeds is also provided. Sequences AAH76341-355 represent a series of 5' deletions in the MS45 promoter region, used for determining the essential region of MS45
                                                                                                                                                                                                                                                                                                                                                                                  A male tissue-preferred regulatory region comprising nucleotide sequences essential for initiating transcription of the MS45 gene useful for mediating fertility in a male plant.
                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                               regulatory region; transcription; male fertility;
                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                               Garnaat CW, Huffman G, Kendall TL;
                             0; Indels
           Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                            Z. mays Ms45 promoter deletion mutant fragment LS12.
           DB 1; Len . 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10 BP; 0 A; 5 C; 5 G; 0 T; 0 U; 0 Other;
          50.0%; Score 8; DB 1100.0%; Pred. No. 2.1 iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                           (PION-) PIONEER HI-BRED INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                           Example 5; Fig 8; 50pp; English.
                                                                                                                  AAH76352 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAI72712 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                         15-FEB-2000; 2000US-00504487.
                                                                                                                                                                                                                                                                                    13-FEB-2001; 2001WO-US004527.
                                                                                                                                                         (first entry)
Query Match
Best Local Similarity 100.
                                                                                                                                                                                                        hybrid seed; promoter; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                             Fox TW,
                                               9 GCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-514772/56.
                                                                  GGCATCGT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                              Ms45; male tissue;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
ses 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 ceeceeec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20000000
                                                                                                                                                                                                                                               WO200160997-A2.
                                                                                                                                                                                                                                                                                                                                             Albertsen MC,
                                                                                                                                                       29-OCT-2001
                                                                                                                                                                                                                                                                 23-AUG-2001
                                                                  10
                                                                                                                                     AAH76352;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 8
                                                                                                                                                                                                                            Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAI72712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAI 72712,
                                                                 셤
                                               ઠે
                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
```

```
The sequences given in AAI72704-13 are antisense oligonucleotides which were used in the method of the invention. The method of the invention comprises analysing a population of oligomeric analyse molecules (AMS) comprises analysing a population of oligomeric analyse molecules (AMS) composed of linked subunits of which at least 50% are uncharged, by applying a mixture of AMS and probe molecules to a charge-bearing separation medium, so that complementary or near-complementary regions of probe and at least one AM are hybridized to form a mixture of species and separating the species within the medium. The method is useful for analysing populations of oligomeric analyte molecules such as peptide nucleic acids, phosphotriester oligomeric analyte molecules such as peptide nucleic acids, phosphotriester oligomeric and chimeras of any member of this group with another member of with DNA, 2'-0-alkyl RNA or 2'-0-allyl RNA, in particular morpholino oligomers having intersubunit linkages such as phosphoramidate and phosphorodiamidate (claimed). The method is suitable for separating, detecting, quantitating and/or isolating predominantly uncharged oligomucleotide analogues. This sequence represents a fragment of the complement of AAI72704 which is antisense to nucleotides 2551-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Analyzing a population of oligomeric analyte molecules e.g. morpholino oligomers, peptide nucleic acids, by resolving duplexes of such molecules with complementary or near-complementary DNA or charged DNA analogs.
                                                                                     Antisense; analyte molecule; AM; probe; complementary region; c-myc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zinc finger protein related oligonucleotide target SEQ ID NO:101.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zinc finger protein; ZFP; DNA binding protein; zinc finger; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.18+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 2 A; 4 C; 3 G; 1 T; 0 U; 0 Other;
Complement #2 of Human c-myc antisense sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure, Fig 4B; 37pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                 30-AUG-2001; 2001WO-US027129.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-AUG-2000; 2000US-0229245P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABQ71300 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (AVIB-) AVI BIOPHARMA INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-AUG-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-362184/39.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 GGCATCGT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 GGCATCGT
```

```
20-NOV-2000; 2000US-00716637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABQ71697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                               Liu O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABQ71697
  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes a zinc finger protein (I) that binds to a target site, comprising a first (F1), a second (F2), and a third (F3) zinc finger, ordered F1, F2, F3 from N-terminus to C-terminus, where the target site comprises, in 3'-5' direction, a first (S1), a second (S2), and a third (S3) target subsite. Also described are: (I) a polypeptide (II) encoding (I) or (II); and (C1) in involves selecting the F1 zinc finger such that it binds to the S1 target subsite, and selecting the F2 zinc finger such that it conditions to the S2 target subsite, and selecting the F2 zinc finger such that it conditions to the S3 target subsite, and selecting the F2 zinc finger such that it binds to the S3 target subsite, thus designing (I) that binds to the S1 target subsite, thus designing (I) that binds to the S1 target subsite, thus designing (I) that binds to the S1 target subsite, thus designing (I) that binds to the S1 target subsite, thus designing (I) that binds to the S1 target subsite, thus designing (I) that binds to the S1 target subsite, thus designing (I) that binds to the S1 target subsite, thus designing (I) that binds to the S1 target for their in subsite, thus the S1 target subsite. (I) is useful in therapeutic methods to modulate the expression of a target region within a subject, in clarget sequences, as well as enhanced biological activity. ABQ71213 to target sequences, as well as enhanced biological activity. ABQ71213 to their incompletion of the present the incompletion of the present incompletion in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                    New zinc finger protein that binds to target site, useful in studying gene function and for human therapeutics and plant engineering, comprises first, second and third zinc fingers, ordered from N- to C-terminus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zinc finger protein related oligonucleotide target SEQ ID NO:1688.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zinc finger protein; ZFP; DNA binding protein; zinc finger; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; ative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                            Example 1; Page 38; 81pp; English.
                                                                                                                       SANG-) SANGAMO BIOSCIENCES INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABQ71696 standard; DNA; 10 BP.
                                                                                            20-NOV-2000; 2000US-00716637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ilarity 100.0%;
Conservative 0
                                                                 20-NOV-2001; 2001WO-US043438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 GCGGGCGG 10
                                                                                                                                                                            WPI; 2002-500284/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GCGGGCGG
            WO200242459-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200242459-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-AUG-2002
                                      30-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABQ71696;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ношо
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    원
```

```
the present invention describes a zinc inger protein (1) finds broad three fields. Comprising a first (81), a second (F2), and a third (F3) cance finger, ordered F1, F2, F3 from N-terminus to C-terminus, where the target site comprises, in 3'-5' direction, a first (81), a second (82), and a third (83) target subsite. Also described are: (1) a polymeptide (11) comprising (1); (2) a polymediacide (11) encoding (1) or (11); and (1) involves selecting the F1 zinc finger such that it binds to the S2 target subsite, selecting the F2 zinc finger such that it binds to the S3 target subsite, thus designing (1) that binds to that it binds to the S3 target subsite, thus designing (1) that binds to the tit binds to the S3 target subsite, thus designing (1) that binds to the tit binds to the S3 target subsite, thus designing (1) that binds to the tit binds to the S3 target subsite, thus designing (1) that binds to the tit binds to the S3 target subsite, thus designing (1) that binds to useful in studying gene function, and for human therapeutic and plant engine fin studying gene function, and for human therapeutic methods to modulate the expression of a target region within a subject, in diagnostic methods for sequence specific detection of target nucleic acid in a sample, and in assays to determined the phenotype and function of target sequences, as well as enhanced hological activity ABG71213 to ABG72214 and ABB48191 to ABB751230 represent DNA target sequences and zinc in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            useful in studying engineering, comprises N- to C-terminus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention describes a zinc finger protein (I) that binds to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zinc finger protein related oligonucleotide target SEQ ID NO:1689.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zinc finger protein; ZFP; DNA binding protein; zinc finger; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                            New zinc finger protein that binds to target site, gene function and for human therapeutics and plant first, second and third zinc fingers, ordered from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 52; 81pp; English
                                                                                                                                                                            (SANG-) SANGAMO BIOSCIENCES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABQ71697 standard; DNA; 10 BP.
20-NOV-2001; 2001WO-US043438.
                                                                                        20-NOV-2000; 2000US-00716637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-NOV-2001; 2001WO-US043438.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-AUG-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 CGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-500284/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200242459-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sabiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAY-2002.
```

WPI; 2002-500284/53

```
Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                           Example 1; Page 52; 81pp; English
     (SANG-) SANGAMO BIOSCIENCES INC
                                                                                                                                                                                                                                                                                                                                                                                            (SANG-) SANGAMO BIOSCIENCES INC
                                                                                                                                                                                                                                                                         ABQ71543 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                  20-NOV-2000; 2000US-00716637.
                                                                                                                                                                                                                                                                                                                                                                       20-NOV-2001; 2001WO-US043438
                                                                                                                                                                                                                                                                                                28-AUG-2002 (first entry)
                                                                                                                                                                                                                          8; Conservative
                                                                                                                                                                                                                                    4 CGGCGGC 11
                           WPI; 2002-500284/53.
                                                                                                                                                                                                                   Best Local Similarity
Matches 8: Conserv
                                                                                                                                                                                                                                                                                                                                                 WO200242459-A2
                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                            30-MAY-2002
                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                     ABQ71543;
                                                                                                                                                                                                               Query Match
                Liu Q;
                                                                                                                                                                                                                                                                                                                                                                                                       Liu 0;
                                                                                                                                                                                                                                                              RESULT 372
                                                                                                                                                                                                                                                                     ABQ71543
ઠે
                                                                                                                                                                                                                                              В
```

```
target site, comprising a first (F1), a second (F2), and a third (F3) carget site, comprising a first (F1), a second (F2), and a third (F3) carget site, comprising a first (F1), a second (F2), and a third (S3) target subsite. Also described are: (1) a polypeptide (I1) comprising (I); (2) a polynucleotide (III) encoding (I) or (III); and a third (S3) target subsite. Also described are: (1) a polypeptide (II) comprising (M) (I) involves selecting the F1 zinc finger such that it comprises (M) (I) involves selecting the F2 zinc finger such that it chinds to the S1 target subsite, and selecting the F3 zinc finger such that it chinds to the S2 target subsite, thus designing (I) that binds to a target site (I) is useful for recognition of trippet target subsites (C) a target site (I) is useful for recognition of the subsite. (I) is useful in studying gene function, and for human therapeutics and plant condulate the expression of a target ranger in therapeutic methods to modulate the expression of a target region within a subject, in diagnostic methods for sequence specific detection of target nucleic acid in a sample, and in assays to determined the phenotype and function of danger sequences, as well as enhanced biological activity. ABG71213 to ABG72214 and ABP48191 to ABF51230 represent DNA target sequences and zinc invention.
                                                                                New zinc finger protein that binds to target site, useful in studying gene function and for human therapeutics and plant engineering, comprises first, second and third zinc fingers, ordered from N- to C-terminus.
                                                                                                                                                                                                                                                       present invention describes a zinc finger protein (I) that binds to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; cytochrome P450; subfamily IID polypeptide 6; CYP2D6; enzyme; chromosome 22q13.1; drug metabolism; detoxification; mono-oxygenase; antiarrhythmia; adrenoreceptor antagonist; hypertension; tricyclic antidepressant; procainamide; drug induced lupus syndrome; environmentally linked disease; Parkinsons's disease; haplotyping; genetic variant; single nucleotide polymorphism; SNP; drug screening; drug discovery; primer extension; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human CYP2D6 gene polymorphism detection primer, SEQ ID NO:109.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.le+02;
les 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50.0%; Score 8; DB 1
100.0%; Pred. No. 2.1
ive 0; Mismatches
                                                                                                                                                                                                     Example 1; Page 47; 81pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABQ72322 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-SEP-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GCGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200238589-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABQ72322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABQ72322
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                              The present invention describes a zinc finger protein (1) that binds to a target site, comprising a first (F1), a second (F2), and a third (F3) are transported tinger, ordered F1, F2, F3 from N-terminus to C-terminus, where the carget site comprises, in 3'-5' direction, a first (S1), a second (S2), and a third (S3) target subsite. Also described are: (1) a polypebtide (II) encoding (I) or (II); and (I) involves selecting the F1 zinc finger such that it binds to the S1 target subsite, and selecting the F2 zinc finger such that it binds to the S2 target subsite, and selecting the F2 zinc finger such that it binds to the S3 target subsite, thus designing (I) that binds to that it binds to the S3 target subsite, thus designing (I) that binds to a target site. (I) is useful for recognition of triplet target subsites. (C a target site. (I) is useful for recognition of the subsite. (I) is useful in studying gene function, and for human therapeutic methods to modulate the expression of a target region within a subject, in c diagnostic methods for sequence specific detection of target nucleic acid in a sample, and in assays to determined the phenotype and function of diagnostic methods for sequence specific detection of target nucleic acid in a sample, and in assays to determined the phenotype and function of target sequences, as well as enhanced biological activity. AB071213 to AB072214 and ABP48191 to ABP51230 represent DNA target sequences and zinc invention of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                   New zinc finger protein that binds to target site, useful in studying gene function and for human therapeutics and plant engineering, comprises first, second and third zinc fingers, ordered from N- to C-terminus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zinc finger protein related oligonucleotide target SEQ ID NO:1277.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zinc finger protein; ZFP; DNA binding protein; zinc finger; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.18+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
```

ö

Gaps

ö

Indels

(GENA-) GENAISSANCE PHARM INC.

09-NOV-2001; 2001WO-US047396. 09-NOV-2000; 2000US-0247943P.

16-MAY-2002.

```
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            임
                                                                                                                                                                        The invention relates to a method for haplotyping the cytochrome P450, cubdamily IID, polypeptide 6 (CYP2D6) gene (AB07215, AB072154) of an individual, and also describes 29 novel polymorphic sites within the individual, and also describes 29 novel polymorphic sites within the individual, and also describes 29 novel polymorphic sites within the human CYP2D6 gene. The CYP2D6 gene is located on chromosome 22q13.1 and contains 9 excess which encode a 497 amino acid protein (ABB05651). CYP2D6 is a mono-oxygenase involved in the detoxification of many drugs and cantiarrhythmics, adrenoreceptor antagonists and tricyclic antideressants, and is also involved in the formation of a metabolite cantideressants, and is also involved in the formation of a metabolite in CYP2D6 activity or expression may also influence an individual's susceptibility to environmentally-linked diseases, and it has been demonstrated that CYP2D6 activity may be involved in the abenomental or pathogenesis of Parkinson's disease, with individuals with a less active form of CYP2D6 activity or expression and crows been demonstrated that CYP2D6 activity may be involved in the carge to the treatment of CYP2D6 protein for use in screening drugs for the treatment of CYP2D6 activity may be involved in the effect.

CYP2D6 nucleic acid sequences are useful in studying the expression and drug-induced lugue syndrome) or which are metabolised by CYP2D6. CYP2D6 nucleic acids and proteins are also useful in studying the effect of myogenteeling and proteins are also useful in studying the effect of proper pathogen and proteins are also useful in studying the effect of proper pathogen and proteins are also useful in studying the effect of proper pathogen and proteins are also useful for haplotyping coligonucleotide primers of suggetion and proteins are also useful in early incompanies, and to control for genetically primers congrision at the earget or are metabolised by CYP2D6. The proper pathogen in populations and in individuals, employing the earget or are metab
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                            9
                                                                       Novel genetic variants of Cytochrome P450, Subfamily IID, Polypeptide isogenes, useful for improving efficiency and reliability in drug development for treating hypertension, arrhythmias and Parkinson's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human Th1 cell preferentially expressed EST SAGE tag, SEQ ID NO:223.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SAGE tag; serial analysis of gene expression; human; Th1 cell;
 Choi JY, Denton RR, Nandabalan K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50.0%; Score 8; DB 1; Length 10; ilarity 100.0%; Pred. No. 2.1e+02; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10 BP; 0 A; 6 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                  Claim 17; Page 19; 158pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABV78512 standard; cDNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
AE, Chew A,
N, Rounds E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                σ
                                             WPI; 2002-519292/55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGCGGGCG
               Petersen N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABV78512;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZXEXEXEX
ZXEXEXEX
ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to SAGE (serial analysis of gene expression) tags and/or Th2 cells. The SAGE tags of this invention consist of a sequence of 10 mucleotides located downstream of the 5'-CATG-3' sequence motif lying nearest to the polyA region of cDNAs derived from a variety of genes. These tags serve to uniquely identify each transcript and can thus be used to analyse the pattern of gene expression in particular cell types. The invention also relates to proteins encoded by the genes expressed in Thi and/or Th2 cells, antibodies against these proteins, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibitors of the expression of groups of genes that are expressed in either or both the two cell types. Groups of genes expressed in Thi and/or Th2 cell types may be used for the diagnosis and treatment of Th1 and Th2-related disorders. Sequences ABV78390-ABV78560 are SAGE tags representing 171 genes which are more highly expressed in Th1 cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chemokine binding protein 2; CCBP2; CCBP2 protein isoform; gene therapy; polymorphic gene variant; single nucleotide polymorphism; human; primer;
activated T cell; T lymphocyte; immune response; expression pattern; preferential expression; immune disorder; EST; expressed sequence tag;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human activated Th1 and Th2 cell expression gene group, useful for the diagnosis and treatment of Th1 and Th2-related diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10 BP; 0 A; 5 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50.0%; Score 8; DB 1; Le
100.0%; Pred. No. 2.1e+02;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCBP2 detecting ASO primer SEQ ID No 67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (KAGA-) KAGAKU GLJUTSU SHINKO JIGYODAN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 19; Page 12; 60pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAL39540 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                        19-DEC-2000; 2000JP-00385816.
                                                                                                                                                                                                                                                                                                                                                                                                        19-DEC-2000; 2000JP-00385816.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12-OCT-2001; 2001WO-US042685.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-OCT-2000; 2000US-0239638P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-SEP-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          representing 171 genes v
compared with Th2 cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-594261/64.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CGGCGGGC
                                                                                                                                                                                                     JP2002186482-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200232926-A2.
                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                         02-JUL-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAL39540;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCR; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 375
AAL39540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
```

```
02-APR-2001; 2001GB-00008182
               WPI; 2002-435524/46.
                                                                                                                                                                                                                    WPI; 2003-075484/07.
                                                                                                     Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                 1 CGGCGGGC
                                                                                                                                                                               WO200281743-A2.
                                                                                                                                                                                                       (HAMI/) HAMILL
                                                                                                                                                                        Unidentified
                                                                                                                                                   20-FEB-2003
                                                                                                                                                                                     17-0CT-2002
                                                                                                                                             ABT14383;
                                                                                                                                                                                                              Hamill B;
                               sogene
                                                                                                                                   ABT14383/c
셤
                                                                                                                                       ò
```

Matches RESULT 37 ADA63306 8 셤 The invention relates to an isolated polymucleotide comprising genes and haplotypes of the Chep2 gene are useful in studying the expression and cunction of CCBP2 and in expressing CCBP2 proteins for use in screening candidate drugs for treating diseases associated with CCBP2 activity. Polymucleotides comprising a polymorphic gene variant or fragment may be seed for therapeutic purposes, where a patient could benefit from expression or increased expression of a patient could benefit from expression or increased expression of a patient could benefit from expression or increased expression of a patient could benefit from expression or increased expression of a patient could benefit from cutout of several steps in drug discovery and development process, including target validation, identifying lead compounds, and early phase including target validation, identifying lead compounds, and early phase colling trials. The polymucleotides of the invention can be used to treat disorders related to the CCBP2 gene by gene therapy. This could be processed to the invention can be used to be processed to the invention can be used to the invention can be used to the invention can be used to be compounded to the invention can be used to the compound can be used to the invention can be used to the compound can be used t ö New genetic variants having polymorphisms in the chemokine binding protein 2 (CCBP2) gene, useful for studying CCBP2 functions, and for treating disorders affected by expression or function of the CCBP2 Gaps . 0 50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; live 0; Mismatches 0; Indels Indels Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other; Koshy B; Claim 15; Page 14; 84pp; English (GENA-) GENAISSANCE PHARM INC. 8; Conservative Armstrong B, Kazemi A,

ABT14383 standard; DNA; 10 BP

(first entry)

Nucleic acid PCR amplification method-related RAPD PCR primer #153. Nucleic acid amplification; nucleic acid analysis; BNA analysis; BNA analysis; RNA analysis; RAPD; PCR; primer; random amplified polymorphic DNA.

28-MAR-2002; 2002WO-GB001489

Amplification of nucleotide sequences from polynucleotides by chain extension of oligonucleotide primers, comprises 2 oligonucleotides in

F

```
The invention comprises a method for the PCR amplification of nucleic acids. The method involves a set of primers, where two of the primers are in solution and at least two other primers are attached to a solid support. The method of the invention can be used for the analysis of a nucleic acid or a mixture of nucleic acids, including: single-stranded DNA molecules, double-stranded DNA molecules and mRNA molecules. The present DNA sequence represents a random amplified polymorphic DNA (RAPD)
                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Designing zinc finger protein that has three zinc fingers from N-terminus and C-terminus that bind to subsites in 3' to 5' direction, in a target site, by selecting zinc fingers that bind their respective subsites.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a method of designing a zinc finger protein. The method is useful for designing a zinc finger protein. The method provides multi-finger zinc finger proteins with improved affinity and specificity for their target sequences, as well as enhanced biological activity. The present sequence represents a zinc finger protein DNA target sequence.
solution, 2 attached to supports and both share complementary sequences.
                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                             DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ds; target sequence; zinc finger protein; multi-finger zinc finger protein; improved affinity; improved specificity; enhanced biological activity.
                                                                                                                                                                                                                                                     Sequence 10 BP; 1 A; 3 C; 3 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                  100.0%; Pred. No. 2.1 ive 0; Mismatches
                                                                                                                                                                                                                                                                                             50.0%; Score 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zinc finger target sequence DNA #328.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 18; 34pp; English.
                                      Disclosure; Fig 17; 60pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-MAR-1999; 99US-0126238P.
24-MAR-1999; 99US-0126239P.
30-UUL-1999; 99US-0146595P.
30-UUL-1999; 99US-0146615P.
23-MAR-2000; 2000US-00535008.
20-NOV-2000; 2000US-00516637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADA63306 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-NOV-2001; 2001US-00990186.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-NOV-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                    8; Conservative
                                                                                                                                                                                                                                                                                                                                                                          7 GCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                 GCGCCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2003-567233/53
                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US2003068675-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-APR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FIUQ/) LIU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADA63306;
                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Liu Q;
```

```
20-NOV-2001; 2001US-00990186
         20-NOV-2003 (first entry)
                                                                                                   US2003068675-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US2003068675-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-APR-2003.
                                                                                                                     10-APR-2003.
                                                                                                                                                                                                                        (FING/) FIN
                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ٣
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADA63718;
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                          Liu Q;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADA63718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                     Designing zinc finger protein that has three zinc fingers from N-terminus and C-terminus that bind to subsites in 3' to 5' direction, in a target site, by selecting zinc fingers that bind their respective subsites.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to a method of designing a zinc finger protein. The method is useful for designing a zinc finger protein. The method provides multi-finger zinc finger proteins with improved affinity and specificity for their target sequences, as well as enhanced biological activity. The present sequence represents a zinc finger protein DNA target sequence.
                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                           0; Indels
       50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 10;
                                                                                                                                                                                  ds; target sequence; zinc finger protein; multi-finger zinc finger protein; improved affinity; improved specificity; enhanced biological activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50.0%; Score 8; DB 1
100.0%; Pred. No. 2.1
iive 0; Mismatches
                                                                                                                                                                 Zinc finger target sequence DNA #481.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 20; 34pp; English
                                                                                                                                                                                                                                                                                              24-MAR-1999; 99US-0126238P.
24-MAR-1999; 99US-0126239P.
30-UIL-1999; 99US-0146595P.
23-WAR-2000; 2000US-00535008.
20-NOV-2000; 2000US-00535008.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADA62130 standard; DNA; 10 BP.
                                                                                                            ADA63717 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                              20-NOV-2001; 2001US-00990186
                                                                                                                                                (first entry)
Query Match
Best Local Similarity 100...
S. Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 ceeceec 11
                                             3 GCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2003-567233/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                             ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                         05055555
                                                                                                                                                                                                                                          US2003068675-A1.
                                                                                                                                                20-NOV-2003
                                                                                                                                                                                                                                                                                                                                                               (FIGO/) FIG
                                                                                                                                                                                                                                                            10-APR-2003
                                                                                                                                                                                                                         Synthetic
                                                                                                                              ADA63717;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADA62130;
                                                                                                                                                                                                                                                                                                                                                                                 Liu Q;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 379
                                                                                         RESULT 378
                                                                                                  ADA63717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADA62130
                                                                                                            용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                              ò
                                                             g
```

```
Designing zinc finger protein that has three zinc fingers from N-terminus and C-terminus that bind to subsites in 3' to 5' direction, in a target site, by selecting zinc fingers that bind their respective subsites.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a method of designing a zinc finger protein. The method is useful for designing a zinc finger protein. The method provides multi-finger zinc finger proteins with improved affinity and specificity for their target sequences, as well as enhanced biological activity. The present sequence represents a zinc finger protein DNA target sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 10; 2.1e+02;
                                                      ds; target sequence; zinc finger protein; multi-finger zinc finger protein; improved affinity; improved specificity; enhanced biological activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ds; target sequence; zinc finger protein; multi-finger zinc finger protein; improved affinity; improved specificity; enhanced biological activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50.0%; Score 8; DB 1
100.0%; Pred. No. 2.1
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zinc finger target sequence DNA #482.
Zinc finger target sequence DNA #85.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 14; 34pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                            24-MAR-1999; 99US-0126238P.
24-MAR-1999; 99US-0126239P.
30-UIL-1999; 99US-0146595P.
23-WAR-2000; 2000US-00535008.
20-NOV-2000; 2000US-00535008.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                                                                                                                                                                                                                                                                                                                                                                                      20-NOV-2001; 2001US-00990186.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADA63718 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 100.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2003-567233/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                œ
```

```
Example 6; SEQ ID NO 1688; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                                           US2003104526-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-JUL-1999;
30-JUL-1999;
23-MAR-2000;
20-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (FIND/) FIN O
                                                                                                                                                                                                                                                                                                                                                        Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                            24-MAR-1999;
                                                                                                                                                                                                                                                                                                 20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                 24-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                             05-JUN-2003
                                                                                                                 invention.
                                                                                                                                                                                                                                                                              ADM21510;
                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Liu O;
                                                                                                                                                                                                                                         RESULT 382
                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                   ADM21510
  δ
                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                       ö
                                                                                                                              Designing zinc finger protein that has three zinc fingers from N-terminus and C-terminus that bind to subsites in 3' to 5' direction, in a target site, by selecting zinc fingers that bind their respective subsites.
                                                                                                                                                                                      The invention relates to a method of designing a zinc finger protein. The method is useful for designing a zinc finger protein. The method provides multi-finger zinc finger proteins with improved affinity and specificity for their target sequences, as well as enhanced biological activity. The present sequence represents a zinc finger protein DNA target sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  zinc finger protein; triplet target subsite; zinc finger motif; sp-1; ds.
                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New zinc finger protein used for recognizing triplet target subsites having nucleotide G in 5'-most position of subsite, that has been optimized with respect to location of subsite within target site.
                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                 50.0%; Score 8; DB 1; Length 10;
100.0%; Pred. No. 2.1e+02;
tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic zinc finger protein target DNA #481.
                                                                                                                                                                      Disclosure; Page 20; 34pp; English.
       24-MAR-1999; 99US-0126238P.
24-MAR-1999; 99US-0126239P.
30-UUL-1999; 99US-0146695P.
23-WAR-2000; 2000US-00536008.
20-NOV-2000; 2000US-00536008.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             990S-0126238P.
990S-0126239P.
990S-0146595P.
990S-0146615P.
20000S-00535008.
                                                                                                                                                                                                                                                                                                                                                                         ADM22215 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-NOV-2001; 2001US-00989994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000US-00716637
                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                        CGGGCGGC 11
                                                                                                             WPI; 2003-567233/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-843091/78.
                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                           Local Similarity
Les 8; Conserv
                                                                                                                                                                                                                                                                                                                          ceeeceec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US2003104526-A1.
                                                                          LIUO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (rino/) rin 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-MAR-1999;
24-MAR-1999;
30-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-2000;
20-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                              20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUN-2003
                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                           ADM22215;
                                                                                                                                                                                                                                                                   Query Match
                                                                        (FINO/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Liu Q;
                                                                                            Liu O;
                                                                                                                                                                                                                                                                                                                                                      RESULT 381
                                                                                                                                                                                                                                                                              Best Loc
Matches
ò
                                                                                                                                                                                                                                                                                                                          셤
```

```
The invention describes a new zinc finger protein that binds to a target site comprising a first (F1), a second (F2) or a third (F3) zinc finger, ordered F1, F2 and F3 from N-terminus to C-terminus. The target site comprises, in the 3 to 5 direction, first (S1), second (S2) and third (S3) target subsites. The zinc finger proteins can be used for recognising triplet target subsites having the nucleotide G in the 5'-most position of the subsite, that has been optimised with respect to the location of the subsite within the target site. This sequence represents the target polynucleotide of a synthetic zinc finger protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention describes a new zinc finger protein that binds to a target site comprising a first (F1), a second (F2) or a third (F3) zinc finger, ordered F1. F2 and F3 from N-terminus to C-terminus. The target site comprises, in the 3' to 5' direction, first (S1), second (S2) and third (S3) target subsites. The zinc finger proteins can be used for recognising triplet target subsites having the nucleotide G in the 5'-most position of the subsite, that has been optimised with respect to the location of the subsite within the target site. This sequence represents the target polynucleotide of a synthetic zinc finger protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  zinc finger protein; triplet target subsite; zinc finger motif; sp-1; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New zinc finger protein used for recognizing triplet target subsites having nucleotide G in 5'-most position of subsite, that has been optimized with respect to location of subsite within target site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Lenvio. 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                                          Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic zinc finger protein target DNA #328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 2.1
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 6; SEQ ID NO 1277; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 8; I
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                             50.0%; Sc.
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0126238P.
99US-0126239P.
99US-0146595P.
99US-0146615P.
2000US-00535008.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20-NOV-2001; 2001US-0098994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADM21510 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2003-843091/78.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ೧೮೮೮೮೮೮೮
```

invention

ន្តដូល

RESULT 383 ADM2221

ઠ 셤

```
The invention describes a new zinc finger protein that binds to a target site comprising a first (F1), a second (F2) or a third (F3) zinc finger, ordered F1, F2 and F3 from N-terminus to C-terminus. The target site comprises, in the 3' to 5' direction, first (S1), second (S2) and third (S3) target subsites. The zinc finger proteins can be used for recognising triplet target subsites having the nucleotide G in the 5'-most position of the subsite, that has been optimised with respect to the location of the subsite within the target site. This sequence represents the target polynucleotide of a synthetic zinc finger protein of the
                                                                                                                                                                   zinc finger protein; triplet target subsite; zinc finger motif; sp-1; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New zinc finger protein used for recognizing triplet target subsites having nucleotide G in 5'-most position of subsite, that has been optimized with respect to location of subsite within target site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Light responsive element; frq gene; LRE; imperfect repeat; ds; WC-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; cive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N. crassa frq gene proximal LRE imperfect repeat #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                               Synthetic zinc finger protein target DNA #85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 6; SEQ ID NO 101; 48pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50.0°,
100.0%; Pre-
0; '
                   BP.
                                                                                                                                                                                                                                                                                                                                                    99US-0126238P.
99US-0126239P.
99US-0146595P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP.
                                                                                                                                                                                                                                                                                                                                                                                                            99US-0146615P.
                                                                                                                                                                                                                                                                                                                   20-NOV-2001; 2001US-0098994
                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-NOV-2000; 2000US-00716637
                   ADM20334 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADJ65133 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                          20-MAY-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2003-843091/78.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                          US2003104526-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (ring/) rin 6.
                                                                                                                                                                                                        Unidentified
                                                                                                                                                                                                                                                                                                                                                                       24-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                        24-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                            30-JUL-1999;
23-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-MAY-2004
                                                                                                                                                                                                                                                                               05-JUN-2003
                                                       ADM20334;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ო
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADJ65133;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Liu O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADJ65133/c
 ADM20334
                                      ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention describes a new zinc finger protein that binds to a target site comprising a first (F1), a second (F2) or a third (F3) zinc finger, ordered F1, F2 and F3 from N-terminus to C-terminus. The target site comprises, in the 3' to 5' direction, first (S1), second (S2) and third (S3) target subsites. The zinc finger proteins can be used for recognising triplet target subsites having the nucleotide G in the 5'-most position of the subsite, that has been optimised with respect to the location of the subsite within the target site. This sequence represents the target polynucleotide of a synthetic zinc finger protein of the
                                                                                                                                                                                                                                                                                                                                                                                         zinc finger protein; triplet target subsite; zinc finger motif; sp-1; ds.
                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New zinc finger protein used for recognizing triplet target subsites having nucleotide G in 5'-most position of subsite, that has been optimized with respect to location of subsite within target site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       h Similarity 100.0%; Score 8; DB 1; Length 10; Similarity 100.0%; Pred. No. 2.1e+02; 8; Conservative 0; Mismatches 0; Indels
                                      Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
Sequence 10 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 0 Other;
                                    DB 1; Len
. 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                      Synthetic zinc finger protein target DNA #482.
                                  Score 8; DB 1; Pred. No. 2.16 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 6; SEQ ID NO 1689; 48pp; English
                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            990S-0126238P.
990S-0126239P.
990S-0146595P.
990S-0146615P.
20000S-00535008.
                                  50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-NOV-2001; 2001US-00989994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-2000; 2000US-00535008
20-NOV-2000; 2000US-00716637
                                                                                                                                                                                                                                          ADM22216 standard; DNA; 10
                                                                       8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 CGGGGGGC 11
                                                                                                           3 GCGGGCGG 10
                                                                                                                                              œ
                                                                                                                                                                                                                                                                                                                 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2003-843091/78.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 8; Conserv
                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99099909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2003104526-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ring/) rin 0.
                                                                                                                                                                                                                                                                                                                                                                                                                               Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-MAR-1999;
30-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-MAR-1999;
                                                                                                                                                                                                                                                                                                                   20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .nvention.
                                                                                                                                                                                                                                                                               ADM22216;
```

Liu O;

d

ð

ö

Gaps

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to regulating expression of a gene in a cell comprising contacting a cell containing flavin adenine dinucleotide (FAD) and a gene operatively-linked to a light-responsive regulatory sequence with a white collar (WC)-1/WC-2 transactivator that binds FAD and the light-responsive regulatory sequence. Also included are a light-responsive regulatory sequence (or light responsive element, LRE) appearing as ADJ65133, ADJ65134, ADJ65135, and ADJ65136 (LREs from the N. crassa frg gene promoter) and a kit comprising a WC-1/WC-2 transactivator and a light-responsive regulatory sequence. The method and kit are useful for regulating gene expression using light. The present sequence is an LRE (comprising an imperfect repeat) from the Neurospora crassa frg gene promoter which binds the WC-1/WC-2 transactivators.
                                                                                                                                                                                                                                                                                                                                           Regulating expression of a gene in a cell comprises contacting a cell containing FAD and a gene operatively linked to a light-responsive regulatory sequence with a WC-1/WC-2 transactivator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hyperlipidemia treatment associated human ITGB3 haplotype probe #139.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ss; probe; antilipemic; gene therapy; allele; polymorphic site; integrin beta 3; ITGB3; statin response marker; hyperlipidemia.
WC-2; white collar complex; flavin adenine dinucleotide; FAD; transactivator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 1 A; 3 C; 3 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                            Claim 3; SEQ ID NO 1; 21pp; English.
                                                                                                                                                                                                                                                                                 Dunlap JC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADN89074 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 100.0%;
nes 8; Conservative 0
                                                                                                                                             26-AUG-2002; 2002US-00228876
                                                                                                                                                                             26-AUG-2002; 2002US-00228876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-OCT-2003; 2003WO-US032361.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-OCT-2002; 2002US-0417743P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-JUL-2004 (first entry)
                                                                                                                                                                                                                                                                                Loros J,
                                                                                                                                                                                                            (FROE/) FROEHLICH A C. (LORO/) LOROS J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7 GCGCCATC 14
                                                                                                                                                                                                                                                                                                              WPI; 2004-203233/19.
                                                                                                                                                                                                                           (LORO/) LOROS J.
(DUNL/) DUNLAP J C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9 GCGCCATC 2
                                               Neurospora crassa.
                                                                              JS2004038400-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO2004033710-A2.
                                                                                                                                                                                                                                                                              Froehlich AC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADN89074;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADN89074
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
```

```
Manner Bentiveges at Statement Frank Inc.

Bentiveges at St. Sispleck Mo. Brain CD. Dain BJ. Cappola G;

Headen BS. Latobacica M. Lee MH. Littvyn L. Messer C. Determining

Well Comprising a set of oligonucleotides useful for determining

Well Comprising a set of oligonucleotides useful for determining

Webbies an individual has a strain response marker I or II for preparing

Webbies an individual has a strain response marker I or II for preparing

Webbies an individual has a strain response marker I or II for preparing

Webbies an individual has a strain response marker I or II for preparing

Webbies an individual has a strain who went in the specification. The set of Dolymorphic sites (BS) sponse and the specification in the Strain S
```

13723, 14235-14858, 16126-16619, 16930-17414, 19241-19644, 19748-20177,

Constituted by the correspondingly numbered haptotype and allowage the sequence except where substituted by the sequence of alleder for the correspondingly numbered haptotype and allowage and alleder for the correspondingly numbered haptotype and allowage the correspondingly numbered haptotype and allowage the correspondingly numbered haptotype and allowage the conflict of the polymorphic sites in haptotype the integral page and allowage and alleder and allowage accordance, except where solution corresponding sequence of amino acids whose positions and allowage are given in the specification; an isolated positions and allowage are given in the specification; an isolated positions and allowage are given in the specification; an isolated polypeptide and allowage are given in the specification; an isolated polypeptide and allowage are given in the specification; an isolated polypeptide and allowage and allowage and allowage are given in the specification; an isolated polypeptide, accordance of amino acids whose positions and allowage and allowage and allowage are allowage and allowage are given in the specification; an isolated polypeptide, accordance of amino acids whose positions are allowage and allowage are formulation contained within the packaging material, where the pharmaceutical formulation comprises a statin as at least one separate active ingredient, and the packaging material comprises an approved label which states that the pharmaceutical formulation is indicated for a population partly or wholly defined by having a statin response marker I, where a trial population having the statin response marker exhibits a better HDLC response to the pharmaceutical formulation than to treatment with atorvastatin or a salt of atorvastatin acid. Preferred Oligonucleotide: The isolated oligonucleotide is an allele-specific

buryworipluc structs. Fructuring mechanism whereing an individual that sealer as a statin response marker I or a statin response marker I or determining the copy number in the individual of the haplotype, where if the selected haplotype so one of haplotypes given in the specification, then the individual has a statin response marker I if the individual has at least one copy of the selected haplotype, and the individual has zero copy of the selected haplotype, and the individual has a statin response marker I if the individual has zero or one copy of the selected haplotype. The individual has a statin response marker I if the individual has two copies of the selected haplotype. The individual has two copies of the selected haplotype. The individual has two copies of the selected haplotype. The individual has two copies of the selected haplotype and using the results of the genotyping step to individual haplotype and using the results of the genotyping step to identify, for the set of polymorphic sites the haplotype pair present in the individual. The determining step comprises consulting a data repository, that provides information on the copy number present in the individual for the selected haplotype. The data repository is the individual to a first or second statin response marker group if the selected haplotype and assigning the individual to a first or second statin response marker group if the selected haplotype and to the first statin response marker group if the selected haplotype and to the second statin response marker group if the selected haplotype and to the second statin response marker group if the individual bas zero or one copy of the selected haplotype. The determining step comprises genotyping each polymorphic site in a set of polymorphic sites in a set of p oligonucleotide that specifically hybridizes to an allele of the ITGB3 gene at a region containing the polymorphic site. The isolated oligonucleotide is a primer-extension oligonucleotide. The kit is for haplotyping the integrin, beta 3 (ITGB3) gene of all individual, comprises a set of oligonucleotides designed for identifying at least one of the alleles at each polymorphic site (PS) in a set of two or more polymorphic sites. Preferred Method: Determining whether an individual Gaps ; 0 0; Indels DB 1; Length 10; Query Match 50.0%; Score 8; DB 1; Ler Best Local Similarity 100.0%; Pred. No. 2.1e+02; Matches 8; Conservative 0; Mismatches 0; ADN89081 standard; DNA; 10 BP. 15-JUL-2004 (first entry) 4 CGGCGGC 11 œ ADN89081;

Hyperlipidemia treatment associated human ITGB3 haplotype probe #146. ss; probe; antilipemic; gene therapy; allele; polymorphic site; integrin beta 3; ITGB3; statin response marker; hyperlipidemia. RESULT 387 ADN89081, g ઠે

ö

(GENA-) GENAISSANCE PHARM INC. 09-OCT-2003; 2003WO-US032361. 09-OCT-2002; 2002US-0417743P. WO2004033710-A2. Homo sapiens. 22-APR-2004.

Petersen N; Cappola G; Messer C, Dain BJ, Bentivegna SC, Bieglecki KM, Brain CD, Dain Judson RS, Lachowicz M, Lee HH, Litvyn L, P Reed CR, Rounds EM, Russo DP, Windemuth AK;

WPI; 2004-340942/31.

New kit comprising a set of oligonucleotides, useful for determining whether an individual has a statin response marker I or II for preparing a composition for treating hyperlipidemia.

A kit compurising a set of oligonucleotides designed for identifying at the computating a set of oligonucleotides designed for identifying at the parameter of the alleles at each polymorphic site (eps) in a set of 129 (identified and inclear to a set of 129 (identified and identified and identified and identified and the parameter of 129 polymorphic sites comparison at 11 me apecification, or a set of polymorphic sites comparison at 11 me apecification; or a set of polymorphic sites comparison at 11 me a set of polymorphic sites comparison at 3 me a substitute habitoype for any one of haplotypes (101-134, 201-43) or 501-515 given in the pagition in the 1277-bps) (101-134, 201-43) or 1215 given in the pagition in the 1277-bps (101-134, 201-43) or 1215 given in the pagition in the 1277-bps (101-134, 201-43) or 1215 given in the 1277-bps (101-134, 201-43) or 1271 polymorphic site concepts of the page (101-134, 201-43) or 1215 given in the 1277-bps (101-134, 201-43) or 1271 polymorphic site concepts of the page (101-134, 201-43) or 1271 polymorphic site concepts of the page (101-134, 201-43) or 1271 polymorphic site concepts of the page (101-134, 201-43) or 1271 polymorphic site concepts of the page (101-134, 201-43) or 1271 polymorphic site concepts of the page (101-134, 201-43) or 1271 polymorphic site of the 1271 polymorphic site Disclosure; SEQ ID NO 149; 202pp; English.

cullical trial of a canadiace entry for treating a dispasse or condition periging a Treat process where the contracting of process, we have the contracting a Treat process, where the contracting of process, we have the contracting a treat comprising a treat comprising a treat comprising a treat comprising to the contracting of the con gene at a region containing the polymorphic site. The isolated oligonucleotide is a primer-extension oligonucleotide. The kit is for haplotyping the integrin, beta 3 (ITGB3) gene of all individual, comprises a set of oligonucleotides designed for identifying at least one of the alleles at each polymorphic site (PS) in a set of two or more polymorphic sites. Preferred Method: Determining whether an individual Oligonucleotide: The isolated oligonucleotide is an allele-specific oligonucleotide that specifically hybridizes to an allele of the ITGB3

repository, that provides information on the copy number present in the individual for the selected haplotype. The data repository is the individual's medical excords or a medical data card. Assigning an individual or a first or second statin response marker group comprises determining the copy number in the individual or a haplotype and assigning the individual to the first statin response marker group if the individual has at least one copy of the selected haplotype and to the second statin response marker group if the individual has at least or copy of the selected haplotype, and assigning the individual to the first statin the selected haplotype and to the second statin response marker group if the individual has zero or one copy of the selected haplotype and to the second statin response marker group if the individual bas two copies of the selected haplotype. The determining step comprises genotyping each polymorphic site in a set of polymorphic sites one copy of the selected haplotype and a statin response marker II if the individual has two copies of the selected haplotype. The individual is a candidate for treatment with a statin. The determining step comprises genotyping each polymorphic site in a set of polymorphic sires comprising the selected haplotype and using the results of the genotyping step to identify, for the set of polymorphic sites the haplotype pair present in the individual. The determining step comprises consulting a data has a statin response marker I or a statin response marker II comprises determining the copy number in the individual of the haplotype, where if the selected haplotype is one of haplotypes given in the specification, then the individual has a statin response marker I if the individual has at least one copy of the selected haplotype and a statin response marker II if the individual has zero copy of the selected haplotype, and a the individual has a zero copy of the selected haplotype, individual has a statin response marker I if the individual has a statin response marker I if the individual has zero or

Gaps ; DB 1; Length 10; . 2.1e+02; ches 0; Indels 50.0%; Score 8; DB 1 100.0%; Pred. No. 2.1 ive 0; Mismatches Local Similarity 100. Query Match Best Loc Matches

ö

ઠે

RESULT 388 ADN89083/

ADN89083 standard; DNA; 10 BP.

ADN89083;

15-JUL-2004 (first entry)

Hyperlipidemia treatment associated human ITGB3 haplotype probe #148. ss; probe; antilipemic; gene therapy; allele; polymorphic site; integrin beta 3; ITGB3; statin response marker; hyperlipidemia.

Homo sapiens.

WO2004033710-A2.

22-APR-2004

09-OCT-2003; 2003WO-US032361.

09-OCT-2002; 2002US-0417743P.

(GENA-) GENAISSANCE PHARM INC.

Bentivegna SC, Bieglecki KM, Brain CD, Dain BJ, Cappc Judson RS, Lachowicz M, Lee HH, Litvyn L, Messer C, Reed CR, Rounds EM, Russo DP, Windemuth AK;

Cappola G; r C, Petersen N;

WPI; 2004-340942/31.

New kit comprising a set of oligonucleotides, useful for determining whether an individual has a statin response marker I or II for preparing a composition for treating hyperlipidemia.

Disclosure; SEQ ID NO 151; 202pp; English

Att computating a set of oligonucleotides designed for identifying at passes of the allasse at each polymorphic site (FS) in a decidentification of the allasse at each polymorphic site (FS) in a decidentification of the computation of the allasse at each polymorphic site (FS) in a decidentification of the computation of the allasse at each polymorphic site (FS) in a decidentification, or a set of polymorphic site operations of the allasse at a set of polymorphic site operations of the allasses at a set of polymorphic site operations of the allasses and the specification; or a set of polymorphic site operations of the allasses and the specification; or a set of polymorphic site operations where the mucleotide position of each polymorphic site operations where the mucleotide position of each polymorphic site occreapons to the following mucleotide position of each polymorphic site occreapons to the following mucleotide position of each polymorphic site occreapons to the following mucleotide position of each polymorphic site occreapons to the following mucleotide position of each polymorphic site occreapons to the following mucleotide for set of the se predicted to be associated with ITGB3 activity; an isolated polypeptide comprising a ITGB3 protein variant consisting of protein variants A, B, C, D, E, F and G and comprising 788-amino acid sequence, except where substituted by the corresponding sequence of amino acids whose positions and alleles are given in the specification; an isolated monoclonal antibody specific for and immunoreactive with the selected ITGB3 protein

ngs20.res

crayering comprises the sholt-peptide; screening for chuga comprises the solice to Tragar program of a single deficient of the solice of consisting of methods and comparison one or more to tragement as a Least 6 amino acids in length and comparison one or more or world and comparison as Least 6 amino acids in length and comparison or more or more or warrant amino acids consisting of methods as a position corresponding to amino acid consisting of methods as a position corresponding to amino acid consisting of the isolated with a second consisting the isolated with the integrit. The second consisting the isolated with a second consisting the isolated with the integrit between the oligometic edit position is to consist the second consisting the isolated with a second consisting the isolated with the integrit between the oligometic edit consisting or in the integrit between the oligometic edit of the second consisting the integrit between the oligometic edit consisting or in the integrit between the oligometic edit of the second consisting on the integrit between the oligometic edit consisting of the selected first broad on the identification of the selected first broad on the identification of the selected selection in the integrit between the oligometic edit of the selected selection of the se

undividual has two copies of the selected haplotype. The individual is a candidate for treatment with a statin. The determining step comprises genotyping each polymorphic aite in a set of polymorphic aites comprises genotyping each polymorphic aites in a set of polymorphic aites comprises identify, for the set of polymorphic sites the haplotype pair present the individual. The determining the comprises consulting a data repository, that provides information on the copy number present in the individual is medical records or a medical data repository is the individual to a first or second statin response marker group comprises determining the copy number in the individual to a first or second statin response marker group comprises assigning the individual to the first statin response marker group if the assigning the individual to the first statin response marker group if the individual has at least one copy of the selected haplotype and to the second statin response marker group if the individual has zero copy of the selected haplotype; and assigning the individual to the first statin response marker group if the individual has zero or one copy of the selected haplotype and to the second statin response marker group if the individual bas two copies of the selected haplotype. The determining step comprises genotyping each polymorphic site in a set of polymorphic sites 88888888888888888888888888

Gaps ö 0; Indels Length 10; DB 1; Ler . 2.1e+02; 50.0%; Score 8; DB 1 100.0%; Pred. No. 2.1 iive 0; Mismatches Best Local Similarity 100. Matches 8; Conservative Query Match

ö

2 GGCGGGCG 9 ð 셤

RESULT 389

ADS76957 standard; DNA; 10 BP. ADS76957;

30-DEC-2004 (first entry)

Breast cancer detection oligonucleotide #739.

ss; primer; cytostatic; RNA interference; RNAi; gene silencing; antisense oligonucleotide inhibitor; cathepsin K inhibitor; cathepsin L inhibitor; cathepsin F inhibitor; metalloprotease 2 inhibitor; thrombospondin-2 antagonist; collagen antagonist; diagnosis; breast tissue; cancer.

Homo sapiens.

WO2004085621-A2.

07-OCT-2004.

22-MAR-2004; 2004WO-US008866.

20-MAR-2003; 2003US-0456735P.

DAND) DANA FARBER CANCER INST INC.

Polyak K, Porter D, Allinen M;

WPI; 2004-728732/71.

Diagnosing breast cancer comprises determining expression levels of a gene selected from those differentially expressed in normal or cancerous cells of a breast tissue sample including interleukin 1, thrombospondin 1 and cystatin C.

Example 2; SEQ ID NO 739; 149pp; English.

The invention relates to a method of diagnosis (MI) comprising: (a) providing a test sample of breast tissue; (b) determining the level of expression in the test sample of a gene (e.g. interleukin-8, superoxide dismutase 2 and tubulin, alpha 3) selected from Table 1 given in the

88888888

ò 셤

```
and cystatin C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-OCT-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polyak K,
                                                                                                                                                    ADS76908;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADS76958;
                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 392
                                                                                                                                                                                                                                                                                                                                                                              Ношо
                                                                                                  ADS76908/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADS76958
                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
                                                                                                                                                                                          ö
specification, and (c) if the gene is expressed in the test sample at a lower level than in a control normal breast tissue sample, diagnosing the test sample as containing cancer cells. The method is used for diagnosing breast cancer. This sequence corresponds to an oligonucleotide primer used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a method of diagnosis (MI) comprising: (a) providing a test sample of breast tissue; (b) determining the level of expression in the test sample of a gene (e.g. interleukin-8, superoxide dismutase 2 and tubulin, alpha 3) selected from Table 1 given in the specification, and (c) if the gene is expressed in the test sample at a lower level than in a control normal breast tissue sample, diagnosing the test sample as containing cancer cells. The method is used for diagnosing breast cancer. This sequence corresponds to an oligonucleotide primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Diagnosing breast cancer comprises determining expression levels of a gene selected from those differentially expressed in normal or cancerous cells of a breast tissue sample including interleukin 1, thrombospondin 1 and cystatin C.
                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88; primer; cytostatic; RNA interference; RNAi; gene silencing;
                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antiense oligonucleotide inhibitor; cathepsin K inhibitor; cathepsin L inhibitor; cathepsin F inhibitor; metalloprotease 2 inhibitor; thrombospondin-2 antagonist;
                                                                                                                                                                                         Indels
                                                                                                                                                    DB 1; Length 10; . 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  collagen antagonist; diagnosis; breast tissue; cancer,
                                                                                                                                                                                         ö
                                                                                                                 Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 1 A; 6 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
50.0%; Score 8; DB 1; Ler
Best Local Similarity 100.0%; Pred. No. 2.1e+02;
Matches 8; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Breast cancer detection oligonucleotide #689.
                                                                                                                                                  50.0%; Score 8; DB 1
100.0%; Pred. No. 2.1
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 2; SEQ ID NO 689; 149pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (DAND ) DANA FARBER CANCER INST INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Allinen M;
                                                                                                                                                                                                                                                                                                                                                          ADS76907 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-MAR-2004; 2004WO-US008866.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-MAR-2003; 2003US-0456735P
                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                         8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polyak K, Porter D,
                                                                                                                                                                                                                                                      3 GGCGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2004-728732/71.
                                                                                                                                                                                                                             6
                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                             2 GGCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2004085621-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                  30-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                               ADS76907;
                                                                                                                                                                                                                                                                                                                        RESULT 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ношо
                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                           ADS76907,
```

Gaps

ö

0; Indels

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a method of diagnosis (M1) comprising: (a) providing a test sample of breast tissue; (b) determining the level of expression in the test sample of a gene (e.g. interleukines, superoxide dismutase 2 and tubulin, alpha 3) selected from Table 1 given in the specification, and (c) if the gene is expressed in the test sample at a lower level than in a control normal breast tissue sample, diagnosing test sample as containing cancer cells. The method is used for diagnosing breast cancer. This sequence corresponds to an oligonucleotide primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Diagnosing breast cancer comprises determining expression levels of a gene selected from those differentially expressed in normal or cancerous cells of a breast tissue sample including interleukin 1, thrombospondin 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                             ss; primer; cytostatic; RNA interference; RNAi; gene silencing; antisense oligonucleotide inhibitor; cathepsin K inhibitor; cathepsin L inhibitor; cathepsin I inhibitor; metalloprotease 2 inhibitor; thrombospondin-2 antagonist; collagen antagonist; diagnosis; breast tissue; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; rative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 1 A; 6 C; 2 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                             Breast cancer detection oligonucleotide #690.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Breast cancer detection oligonucleotide #740.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 2; SEQ ID NO 690; 149pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (DAND ) DANA FARBER CANCER INST INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Allinen M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-MAR-2004; 2004WO-US008866.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-MAR-2003; 2003US-0456735P.
                                                                                                                                                                                      ADS76908 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADS76958 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-DEC-2004 (first entry)
                                                                                                                                                                                                                                                                                                             30-DEC-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Porter D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-728732/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCGGCCGG 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
05055555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2004085621-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          田林なななは
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
```

(GENZ) GENZYME CORP.

Page 207

```
Wed May 10 10:49:51 2006
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a method of diagnosis (M1) comprising: (a) providing a test sample of breast tissue; (b) determining the level of expression in the test sample of a gene (e.g. interleukin.8, superoxide dismutase 2 and tubulin, alpha 3) selected from Table 1 given in the specification, and (c) if the gene is expressed in the test sample at a lower level than in a control normal breast tissue sample, diagnosing the test sample as containing cancer cells. The method is used for diagnosing breast cancer. This sequence corresponds to an oligonucleotide primer used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                          Diagnosing breast cancer comprises determining expression levels of a gene selected from those differentially expressed in normal or cancerous cells of a breast tissue sample including interleukin 1, thrombospondin 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
             ss; primer; cytostatic; RNA interference; RNAi; gene silencing; antisense oligonucleotide inhibitor; cathepsin K inhibitor; cathepsin F inhibitor; cathepsin F inhibitor; metalloprotesse 2 inhibitor; thrombospondin-2 antagonist; collagen antagonist; diagnosis; breast tissue; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   screening; hypoxia-related tumourigenesis;
hypoxia-induced gene regulation; tumour; SAGE tag; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hypoxia-related tumourigenesis-related SAGE tag #210.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Pred. No. 2.1
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 2; SEQ ID NO 740; 149pp; English.
                                                                                                                                                                                                                                                               (DAND ) DANA FARBER CANCER INST INC.
                                                                                                                                                                                                                                                                                                Allinen M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADU18419 standard; DNA; 10 BP
                                                                                                                                                                                                   22-MAR-2004; 2004WO-US008866.
                                                                                                                                                                                                                                20-MAR-2003; 2003US-0456735P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-APR-2003; 2003US-0461712P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            09-APR-2004; 2004WO-US011087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8; Conservative
                                                                                                                                                                                                                                                                                              Polyak K, Porter D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-728732/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                       WO2004085621-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2004092198-A2
                                                                                                                                                                                                                                                                                                                                                                                                           and cystatin C.
                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-JAN-2005
                                                                                                                                                                    07-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADU18419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 393
ADU18419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
#X#X#X#XXXX#X#X#X#X#X#
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
ö
                                                                                                                                                                                                                        The invention comprises a method of screening for candidate agents capable of altering the biological activity of a protein encoded by a nucleotide involved in hypoxia-related tumourigenesis. The method of the invention involves: contacting a test agent with a target cell expressing the nucleotide, and monitoring the activity of the expressed protein product; if the test agent modifies the activity of the expressed protein then this is a candidate agent. The method of the invention is useful for modifying hypoxia-induced gene regulation and for diagnosing, prognosing or treating tumours. The present DNA sequence represents a SAGE tag that was used in the exemplification of the invention.
                                                                                                           Identifying agents that alter biological activity of a polypeptide encoded by a polynucleotide involved in hypoxia-related tumorigenesis comprises contacting an agent with a target cell and monitoring activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Identifying agents that alter biological activity of a polypeptide encoded by a polynucleotide involved in hypoxia-related tumorigenesis comprises contacting an agent with a target cell and monitoring activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention comprises a method of screening for candidate agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 10; . 2.1e+02; ches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         screening; hypoxia-related tumourigenesis;
hypoxia-induced gene regulation; tumour; SAGE tag; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypoxia-related tumourigenesis-related SAGE tag #2140
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                         50.0%; Score 8; DB 1
100.0%; Pred. No. 2.1
iive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure, Page 100; 100pp, English.
                                                                                                                                                                                           Disclosure; Page 60; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADU20349 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-APR-2004; 2004WO-US011087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-APR-2003; 2003US-0461712P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-JAN-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Conservative
                                                                                                                                                              expressed product.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 GCCGGCC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (GENZ ) GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expressed product
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2004-758333/74.
                                                                              WPI; 2004-758333/74
                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 GGCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004092198-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-OCT-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADU20349;
                                             Nacht M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nacht M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADU20349
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ઠ
```

```
ö
capable of altering the biological activity of a protein encoded by a mucleotide involved in hypoxia-related tumourigenesis. The method of the invention involves: contacting a test agent with a target cell expressing the nucleotide, and monitoring the activity of the expressed protein product; if the test agent modifies the activity of the expressed protein then this is a candidate agent. The method of the invention is useful for modifying hypoxia-induced gene regulation and for diagnosing, prognosing or treating tumours. The present DNA sequence represents a SAGE tag that was used in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention comprises a method of screening for candidate agents capable of altering the biological activity of a protein encoded by a nucleotide involved in hypoxia-related tumourigenesis. The method of the invention involves: contacting a test agent with a target cell expressing the nucleotide, and monitoring the activity of the expressed protein product; if the test agent modifies the activity of the expressed protein then this is a candidate agent. The method of the invention is useful for modifying hypoxia-induced gene regulation and for diagnosing, prognosing or treating tumours. The present DNA sequence represents a SAGE tag that was used in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Identifying agents that alter biological activity of a polypeptide encoded by a polynucleotide involved in hypoxia-related tumorigenesis comprises contacting an agent with a target cell and monitoring activity
                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                       0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 50.0%; Score 8; DB 1; Length 10; Best Local Similarity 100.0%; Pred. No. 2.1e+02; Matches 8; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                             DB 1; Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hypoxia-related tumourigenesis-related SAGE tag #1563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    screening; hypoxia-related tumourigenesis;
hypoxia-induced gene regulation; tumour; SAGE tag;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                       Seguence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                             50.0%; Score 8; DB 1
100.0%; Pred. No. 2.1
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 86; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADU19772 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-APR-2003; 2003US-0461712P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-APR-2004; 2004WO-US011087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13-JAN-2005 (first entry)
                                                                                                                                                                                                                                                                                       8; Conservative
                                                                                                                                                                                                                                                                                                                                                                   3 GGCGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GENZ ) GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-758333/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       expressed product
                                                                                                                                                                                                                                                                                                                               2 GGCGGGCG 9
                                                                                                                                                                                                                                                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2004092198-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADU19772;
                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nacht M;
                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 395
                                                                                                                                                                                                                                                                                       Matches
      88888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                   셤
```

Gaps

;

Indels

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Screening compound by contacting compound with cell having polynucleotide encoding fusion protein of functional domain and engineered zinc finger protein targeted to endogenous cellular gene, to measure expression of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         method involves contacting the compound with a cell having a first and second polynucleotide encoding fusion protein of first and second first and second engineered zinc finger protein (ZFD) targeted to a first and second endogenous cellular gene and measuring expression of the first and second endogenous genes. The invention is useful for screening a compound for its specificity, toxicity or metabolic properties by utilising a cell e.g., mammalian cell and for screening a compound utilised as agonist or antagonist of human hormone receptor. The present sequence is human annexins, AnxA8 binding site oligonucleotide. This sequence is used in the multiplex screening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention relates to a method of screening a compound.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.0%; Score 8; DB 1; Length 10; 100.0%; Pred. No. 2.1e+02; ive 0; Mismatches 0; Indel8
                                                                                                                                                                                                                            ZFP; zinc finger protein; toxicity; annexins; AnxA8; ss.
                                                                                                                                                                                              Human annexins, AnxA8 ZFP binding site oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 2; SEQ ID NO 32; 44pp; English
                                                                                                                                                                                                                                                                                                                                                                                                              (SANG-) SANGAMO BIOSCIENCES INC.
                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP.
                                                                                                                                                                                                                                                                                                                                                   18-SEP-2003; 2003US-00666923.
                                                                                                                                                                                                                                                                                                                                                                                   20-SEP-2002; 2002US-0412345P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAX54772 standard; DNA; 11
                                                                                                       ADU67738 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Conservative
                            GGCGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGGGCGGC 11
σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-832939/82.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                             Tse C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 endogenous genes.
                                                                                                                                                                                                                                                                                        US2004235002-A1
                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                 10-FEB-2005
                                                                                                                                                                                                                                                                                                                      25-NOV-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Holmes M,
                                                                                                                                   ADU67738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAX54772;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  assay
                                                                          RESULT 396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Loc
Matches
                                                                                          ADU67738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX5477
                                                                                                        d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
```

```
Endothelial nitric oxide synthase antisense oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                    0; Indels
                                                                                                                                                                                                                                                                                                                                                         50.0%; Score 8; DB 1; Length 11; 100.0%; Pred. No. 2.4e+02; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                    Disclosure; Page 61; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                            AAA34219 standard; DNA; 11 BP.
                                                                                                                98WO-US019419.
                                                                                                                                  98US-00093972.
                                                                                                                             97US-0059160P.
                                                                                                                                              (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
Les 8; Conservative
                                                                  prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                             CGGCGGGC 11
                                                                                                                                                                      WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                  1 CGGCGGGC 8
                                                                                                                 17-SEP-1998;
                                                                                                                            17-SEP-1997;
                                                                                         WO9913886-A1
                                                                                                                                   09-JUN-1998;
                                                                                                     25-MAR-1999
                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                           Nyce JW;
                                                                                                                                                                                                                                                                                                                                                               Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 398
8
                                                                                                                                                                                                                                                                                                                                                                                                                            HXXX
```

```
Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorochioate; impaired respiration; inflammation; allergy; allergy; disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic, antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                        Human adenosine receptor related polynucleotide SEQ ID NO:1908.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 505; 1343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYEC-) UNIV EAST CAROLINA.
28-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-205971/18.
                                                                                                                                                                                                                                                                                                                                                                                           WO200009525-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                              24-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
  The specification describes antisense oligonucleotides (AAX52869-X55271)
directed against at least 2 mRNAs selected from target genes, coding and
con-coding regions of RNAs corresponding to target genes, gene initiation
codons, genomic flanking regions, intron-coding tegions and all
codons, genomic flanking regions, intron-coding regions and all
segments of RNAs encoding proteins associated with one or more diseases,
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX5120-74. These multiple target oligonucleotides
conditions or mixtures. The antisense oligonucleotides may be derived
from sequences AAX5180-271) can be used for the antisense treatment of
diseases and conditions. Typical diseases and conditions are those
associated with impaired respiration and inflammation, including lung
diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis,
cutte asthma, allergies, asthma, impeded respiration, respiratory
distress syndrome, pain, cystic fibrosis, pulmonary hypertension,
cutte asthma, allergies, asthma, impeded respiration, respiratory
distress constriction, emphysema, chronic obstructive pulmonary
cutte aster (CODD), and cancers such as leukemias, lymphomas, carcinomas e.g.
colon cancer, breast cancer, lung cancer, pancreatic cancer,
colon cancer, breast cancer, mich may metastasize or have metastasized
                                                                                           pulmonary vasoconstriction, inflammation, allergic rhinitis, acute asthma; allergy, asthma; impeded respiration, respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasoconstriction, emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                   antisense treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the lungs, including breast and prostate cancer
                                           Antisense oligonucleotide; multiple target; antis
impaired respiration; inflammation; lung disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 11 BP; 0 A; 4 C; 7 G; 0 T; 0 U; 0 Other;
```

99WO-US017712. 98US-0095212P. The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets concleted acids involved in bronchoconstriction, allergies, and/or inflammation. The ON can have antialial antial ergics, antialiary the treatment of diseases associated with filammation. The ON can have antialial ergics, antialiary conclusion in the lungs of a subject. They can be used for treating effects afflict the lungs of a subject. They can be used for treating cet. impaired airways, including lung diseases and diseases whose secondary impeded respiration, respiratory distress syndrome, pain, altergies, asthma, impeded respiration, respiratory distress such as leukaemias, lumphomas, or pulmonary hypertension, emphysema, chronic obstructive fibrosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONS reduces side effects. The A-containing ONS break down with the cronic as side effects. The A-containing ONS break down with the concentration and inflammation. AAA3313 to AAA35312 represent the invention, which correspond to SEQ ID NO:1 to 185, but the sequences differ correspond to SEQ ID NO:1 to 185, but the sequences differ corresponding SEQ ID NO:1 to 185, but the present invention. N.B. Sequences given in the disclosure of the present invention. N.B. could be advanced by the corresponding SEQ ID NO: sequences given in the disclosure of the present invention. N.B. including the content of the present invention. N.B. including the sequences given in the disclosure of the present invention. N.B. including the sequences given in the disclosure of the present invention. N.B. including the sequences given in the disclosure of the present invention. listing

ö

Gaps

ö

Indels

DB 1; Length 11; 2.4e+02;

50.0%; Score 8; DB 1 100.0%; Pred. No. 2.4 :ive 0; Mismatches

Query Match Best Local Similarity luv.v. Best and 8; Conservative

ceeceeec 11

æ

ò g

AAA34219;

Sequence 11 BP; 0 A; 4 C; 7 G; 0 T; 0 U; 0 Other;

0; Gaps

```
Claim 14; Page 251; 1592pp; English.
   AAF20341 standard; DNA; 11 BP.
                                                                                                                                                        and respiratory obstructions.
                                                                                                     24-MAR-2000; 2000WO-US008020
                                                                                                            99US-0127958P
                                                                                                                    (UYEC-) UNIV EAST CAROLINA.
(NYCE/) NYCE J W.
                   (first entry)
                                                                                                                                                                                                                                                                                    the present invention
                                                                                                                                        WPI; 2000-679539/66.
                                                                                     WO200062736-A2
                                                                              Homo sapiens.
                                                                                                            36-APR-1999;
                   14-MAR-2001
                                                                                             26-OCT-2000
                                                                      cancer; ss.
           AAF20341;
                                                                                                                                Nyce JW;
AAF20341
```

```
GGCGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     e.g. skin cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200253774-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Petersohn D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-JUL-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABV70698;
                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                      RESULT 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 401
                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                  ABV70698
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                     ઠે
                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     corporation and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and activatory disorders and malignancies, such as stimulating and activating peptide factors and transmitters, transcription factors, immunoglobulins and antibodies, and though receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, central nervous system (CNS) and peripheral nervous and non-nervous system receptors, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antiense oligonucleotides and ballgnancy associated proteins. The antiense oligonucleotides and believe the system of the system of the system of anticon and peripheral nervous and non-nervous system completed in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(ies) and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                                                                                                                                                                                                                                                                                                                                                                                                     respiratory obstruction, pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antinfilammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchtis, and/or cancer. AAF16434 to AAF21543 represent human polymuclectide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                           Human endothelial nitric oxide synthase polynucleotide fragment #1908.
                                                                                                                                                                                                                                                                                                    Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; alrway disorder; bronchoconestriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic;
RESULT 399
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to in vitro identification (M1) of genes expressed in the skin of humans or animals by subjecting a mixture of genetically encoded factors from skin, to serial analysis of gene expression. ($AGE$) so as to identify skin-expressed genes and quantify their expression. (M1) is useful for identifying genes involved in skin homeostasis; to determine skin homeostasis and to test agent (A) that maintains or promotes skin homeostasis or that can be used for treating skin disorders, specifically neurodermatitis; sunburn, psoriasis, scleroderma; ichthyosis; atopic dermatitis; acne; seborrhea; lupus erythematosus; ichthyosis, melanoma; basal cell carcinoma; and carcinoma or sarcoma of the skin. The present sequence is that of a human expressed sequence tag (EST) of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       In vitro identification of skin-expressed genes, useful for determining homeostasis and identifying cosmetic or pharmaceutical agents against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; skin; dermatological; vulnerary; antipsoriatic; antiseborrhaeic; immunosuppressive; antiinflammatory; cytostatic; SAGE; neurodermatitis; psoriasis; dermatitis; skin cancer; EST; expressed sequence tag; ss.
                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                    ő
                                                                   2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                          DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 11;
Sequence 11 BP; 0 A; 4 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 11 BP; 0 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50.0%; Score 8; DB 1; Ler 100.0%; Pred. No. 2.4e+02; iive 0; Mismatches 0;
                                 50.0%; Scor.
100.0%; Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hofmann K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 24; Page 271; 1345pp; German.
                                                                                                                                                                                                                                                                                                                                                                                        ABV70698 standard; cDNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-DEC-2001; 2001WO-EP015179.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-JAN-2001; 2001DE-01000127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conradt M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 100.
Matches 8; Conservative
                                                                                                                    8; Conservative
                                                                                                                                                                                                                                     4 ceceeec 11
                                                                                                                                                                              00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-590638/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human skin EST 8484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HENK ) HENKEL KGAA
                                                                            Local Similarity
```

```
11-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABZ96035;
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABZ96035
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to in vitro identification (MI) of genes expressed in the skin of humans or animals by subjecting a mixture of genetically encoded factors from skin, to serial analysis of gene expression (SAGE) so as to identify skin-expressed genes and quantify their expression.

(MI) is useful for identifying genes involved in skin homeostasis; to determine skin homeostasis and to test agent (A) that maintains or promotes skin homeostasis or that can be used for treating skin disorders, specifically neurodermatitis; sunburn, psoriasis, soleroderma; ichthyosis; atopic dermatitis; acne; seborrhea; lupus erythematosus; rosaces; melanoma; basal cell carcinoma; and carrinoma or sarcoma of the EST) of the invention
                                                                                            Human; skin; dermatological; vulnerary; antipsoriatic; antiseborrhaeic;
immunosuppressive; antiinflammatory; cytostatic; SAGE; neurodermatitis;
psoriasis; dermatitis; skin cancer; EST; expressed sequence tag; ss.
                                                                                                                                                                                                                                                                                                                   In vitro identification of skin-expressed genes, useful for determining homeostasis and identifying cosmetic or pharmaceutical agents against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human, skin, dermatological, vulnerary, antipsoriatic, antiseborrhaeic,
immunosuppressive, antiinflammatory, cytostatic, SAGE, neurodermatitis,
psoriasis, dermatitis, skin cancer, EST, expressed sequence tag, ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50.0%; Score 8; DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11 BP; 1 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 2.4
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 212; 1345pp; German.
                                                                                                                                                                                                                                                                           Hofmann K;
           BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABV63277 standard; cDNA; 11 BP.
                                                                                                                                                                                                          20-DEC-2001; 2001WO-EP015179.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.08;
                                                                                                                                                                                                                                03-JAN-2001; 2001DE-01000127
          ABV68955 standard; cDNA; 11
                                                   21-OCT-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-OCT-2002 (first entry)
                                                                                                                                                                                                                                                                           Petersohn D, Conradt M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 100.
Matches 8; Conservative
                                                                        Human skin EST 6741.
                                                                                                                                                                                                                                                    (HENK ) HENKEL KGAA
                                                                                                                                                                                                                                                                                               WPI; 2002-590638/63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 CGGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGGCGGGC 2
                                                                                                                                                                                                                                                                                                                                            e.g. skin cancer.
                                                                                                                                                               WO200253774-A2.
                                                                                                                                          Homo sapiens
                                                                                                                                                                                    11-JUL-2002
                               ABV68955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABV63277;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
ABV68955/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABV63277
                               ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
```

the second of the second

```
The invention relates to in vitro identification (M1) of genes expressed in the skin of humans or animals by subjecting a mixture of genetically encoded factors from skin, to serial analysis of gene expression (SAGE) so as to identify skin-expressed genes and quantify their expression.

(M1) is useful for identifying genes involved in skin homeostasis; to determine skin homeostasis and to test agent (A) that maintains or pronotes skin homeostasis or that can be used for treating skin disorders, specifically neurodermatitis; sunburn; psoriaais; scleroderma; ichthyosis; atopic dermatitis; acne; seborrhea; lupus erythematosus; rosacea; melanoma; basal cell carcinoma; and carcinoma or sarcoma of the skin. The present sequence is that of a human expressed sequence tag (EST) of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; antisense; lung dysfunction, nasal airway dysfunction; antiinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            In vitro identification of skin-expressed genes, useful for determining homeostasis and identifying cosmetic or pharmaceutical agents against e.g. skin cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human endothelial nitric oxide synthase antisense fragment no.1895.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11 BP; 0 A; 3 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50.0%; Score 8; DB 1
100.0%; Pred. No. 2.4
:ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                           Hofmann K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 54; 1345pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멾.
                                                                                                                                                                                                      20-DEC-2001; 2001WO-EP015179.
                                                                                                                                                                                                                                                                               03-JAN-2001; 2001DE-01000127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24-APR-2001; 2001US-0286137P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABZ96035 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-OCT-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                       Petersohn D, Conradt M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                              (HENK ) HENKEL KGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-590638/63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGCGGGCG
                                                                  WO200253774-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200285308-A2
Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
```

```
The invention relates to a novel pharmaceutical composition, which has a first active agent comprising an oligonuclectide antisense to the initiation cooding regain, 5 or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nuclectides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entiinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing levels of adenosine of increasing levels of thighinone or increasing levels of thighinone or increasing levels of the control of the control or increasing levels or control or increasing levels of the control or control or increasing levels of the control or c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                  Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis; pulmonary transplantation rejection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      surfactant in a subject's tissue, or treating bronchoconstriction,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human, antisense, bronchoconstriction; allergy, hyposecretion, pain, respiratory tract inflammation, adenosine sensitivity; lung, cancer, surfactant depletion; antiallergic, antiinflammatory; antiasthmatic;
                                                              Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 11; . 2.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human endothelial nitric oxide synthase fragment 1895.
                                                              Katz E, Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 11 BP; 0 A; 4 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                             Disclosure; SEQ ID NO 11277; 872pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50.0%; Score 8; DB 1
100.0%; Pred. No. 2.4
:ive 0; Mismatches
                                                        Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABD19675 standard; DNA; 11 BP.
(EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-APR-2002; 2002WO-US013143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 50.0
Best Local Similarity 100.
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 CGGCGGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                          WPI; 2003-229219/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200285309-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-OCT-2002
                                                           Nyce JW, |
Miller S,
                                                                                                                                                                                                                                                                                        ubiquinone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABD19675;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABD1967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
  ઠ
```

```
This invention describes a novel composition (a) a first active agent, comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating comprising oligonucleotides, effective for alleviating control of a target polypeptide adenosine (A) or (A) receptors, coligonucleotides are derived from a gene encoding or regulating expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung expression of a target polypeptide associated with lung airway or lung carrier and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery device, in separate containers, (b) the oligonucleotides, (c) instructions for adding a carrier and for use of the kit. The composition of the invention has antiallargic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a conference of a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiratory disease, pulmonary control 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
                                                                                                                                                                                                                                              ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                               Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted trucleic acids associated with lung airway or lung dysfunction, and
                                                                                            Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        facial skin; human; serial analysis of gene expression; SAGE; homeostasis; biochip; cosmetic; pharmaceutical; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human facial skin-associated DNA fragment SEQ ID NO 2940.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1; Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
                                                                                                 Katz E, Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 11 BP; 0 A; 4 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Preu. ...
                                                                                                                                                                                                                                                                                                                                             Claim 15; SEQ ID NO 11277; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 8; I
Pred. No.
                                                                                            Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADQ34850 standard; DNA; 11 BP
24-APR-2001; 2001US-0286036P.
                                              (EPIG-) EPIGENESIS PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-SEP-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Conservative
                                                                                                                                                                                                                                                                                            bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ceeceeec 11
                                                                                                                                                                    WPI; 2003-093058/08.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CGGCGGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                   Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADQ34850;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                 Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADQ34850,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
```

ngs20.res

```
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                    This invention describes a novel in vitro method for identifying genes
that are significant for facial skin in humans. The method comprises
that are significant for facial skin in humans. The method comprises
cc tracovering, from facial skin, a first mixture of genetically expressed
ct transcribed and optionally translated) factors (i.e. proteins, mRNA or
their fragments), recovering a second, similar mixture from some other
breast and subjecting the mixtures to serial analysis of gene expression
cc facts) to identify those genes for which expression is markedly different
between facial skin and the other tissue. The invention also describes an
cc between facial skin and the other tissue. The invention also describes an
cc in vitro method for determining homeostasis of human facial skin; a test
ckit which comprises a solid support (flexible or rigid) on which are
cimmobilised probes that bind specifically to the factors of interest and
a biochip for determining homeostasis of human facial skin. The products
cc the invention are also used in a method which determines activity of
ccosmetic and pharmaceutical agents for use against disorders or
cc disturbances of the homeostasis of human skin and a screening method for
identifying cosmetic and pharmaceutical agents. The method allows
cidentifying cosmetic and pharmaceutical spenes important for facial
skin and thus of a very wide range of potential therapeutic and cosmetic
agents. ADQ31911-ADQ35111 represent human DNA Tag fragments used to
cc identify the facial skin-associated genes described in the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antibody panning; random peptide library; ligand screening; dynorphin B;
linker; dodecamer peptide; ss.
                                                                                                                                                                                                                                           In vitro identification of genes important for facial skin, useful for assessing homeostasis and in screening for pharmaceutical or cosmetic agents, based on differential expression analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Half-site oligonucleotide ON-370 for random dodecamer peptide insert.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                Gassenmeier T, Holtkoetter O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50.0%; Score 8; DB 1; Length 11; 100.0%; Pred. No. 2.4e+02; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11 BP; 1 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                           Claim 4; SEQ ID NO 2940; 577pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAQ71041 standard; DNA; 11 BP.
                                                                20-DEC-2002; 2002DE-01060928
                                                                                              20-DEC-2002; 2002DE-01060928
                                                                                                                                                                Schlotmann K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8; Conservative
                                                                                                                                              Petersohn D, Schluum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (revised)
                                                                                                                                                                                                              WPI; 2004-518855/50.
                                                                                                                                (HENK ) HENKEL KGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CGGCGGC 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                 08-JUL-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25-MAR-2003
21-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US5338665-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-AUG-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAQ71041;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
ઠે
```

```
Complementary oligonucleotides ON-335 and ON-336 (AAQ71038 and AAQ71039) replaced a Sfil-HindIII dynorphin B fragment of pMC3 (see AAQ71036-7). A random doceamer peptide library was constructed by replacing the ON-335/336 insert by oligonucleotides ON-332, -370 and -369 (AAQ71040-2, respectively). ON-370 and ON-369 annealed to ON-332 to produce Sfil and HindIII-compatible ends but the ligated product does not have either arcognition sequence. The random peptide library was panned with an antibody specific for dynorphin B and peptides were identified which possessed homology to the dynorphin B epitope. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dynorphin B; random peptide library; construction; monoclonal antibody; D32.39; epitope; screening; pM3; pMC5; primer; PCR; ss.
                                                                                                                                                                                        Construction of random peptide library - by creating vectors contg. DN encoding the random peptide(s) fused to BNA binding proteins; used to screen for novel ligands.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Random peptide libraries comprising host cells expressing DNA binding proteins fused with random peptide(s) - used to identify, e.g. peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48.8%; Score 7.8; DB 1; Length 11; 81.8%; Pred. No. 2.6e+02; ive 0; Mismatches 2; Indela
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ON-369 for random dodecamer peptide library construction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 11 BP; 1 A; 5 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cull MG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stemmer WPC, Miller JF, Schatz PJ,
                                                                                                                                                                                                                                                                    Example 1; Col 26; 45pp; English.
                                                                          (AFFY-) AFFYMAX TECHNOLOGIES NV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (AFFY-) AFFYMAX TECHNOLOGIES NV.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAT14738 standard; DNA; 11 BP.
  92US-00963321.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94US-00290641.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       91US-00778233.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 81.8
Les 9; Conservative
                                                                                                                Schatz PJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 GGCGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proteins fused with raligands of receptors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCCACCGT
                                                                                                                                                      WPI; 1994-263274/32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1996-159686/16.
                                                                                                                Stemmer WPC,
15-0CT-1992;
                                      16-OCT-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-AUG-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-OCT-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-OCT-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-MAR-2003
21-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US5498530-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-MAR-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAT14738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 407
```

```
WO200120026-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wojnowski L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1
                                                                                                                                                                                                                                                                                                                    11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAS02829;
                                                                                                                                                                                                                                                                                                                                                                                             RESULT 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   828888
                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The following mini-ribozymes of formulae (I) and (II) are new: 3'- Q1n. . .Q12 Q11 A A A G L V Q21 Q22. . .Q2m-5' (I); and 3'-R1n. . .R12 R11 W M G Y A G U C R21 R22. . .R2m-5' (II): Y = A, G C or U; L = (3')-C-(5') and M = (3')-G-(5') or L = (3')-C M Or C and M' = the complementary nucleotides of N; p = 1-10 (same for both N and N'); V = (3')-ARQGC-(5') and W = (3')-ARQGC-(5') or V,W = a bond; Q and R are RNA or DNA mononcleotides complementary to a target RNA; Q1n, . .Q12 Q11 with R1n . .R12 R11 and Q21 Q22. . .Q2m with R21 R22. .R2m are same or different; m, n = an integer. Winizibozyme dimers of the formula (I/II) are also claimed and have a two-part binding region for target RNA and L and M are base-paired to form a stem structure. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                              A random peptide (RP) library can be constructed by transforming host cells with a collection of recombinant vectors that encode a fusion protein comprised of a DNA binding protein (BP) and a RP and also contains a binding site for the DNA BP. The RP library can be used to screen for novel ligands, the method resulting in the formation of complex comprising the fusion protein bound to a receptor through the RP ligand and to the recombinant DNA vector through the DNA BP. ANII4737, encoding a random dodecamer peptide, was synthesised and purified by HPLC and phosphorylated with T4 kinase. Two half-site oligonucleotides (AATI4737 to produce Sfil and HindIII-compatible ends, resp., but the ligated product does not have either recognition sequence. (Updated on 25-MAR-2003 to correct PF field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Two mini ribozymes which hybridise to form a new heterodimer - useful for cleavage and inactivation of a target DNA, especially for diagnosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                miniribozyme; ribozyme; dimer; cleavage; disease; treatment; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RNA sequence disclosed in patent on miniribozymes.
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 11 BP; 1 A; 5 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 7.8; DB 1;
Pred. No. 2.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (AGEN ) AGENCY OF IND SCI & TECHNOLOGY. (HITB ) HITACHI CHEM CO LTD. (TAIS ) TAISHO PHARM CO LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 12; 15pp; Japanese.
                         Example 2; Col 25; 46pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48.8%;
81.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96JP-00034898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treatment of genetic disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96JP-00034898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAT91967 standard; RNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6 GGCGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGCGCCACCGT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1997-553198/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP09224673-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-FEB-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-FEB-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAT91967;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AMT91967/
XX
AMT91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           엄
```

à

```
ö
                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAS02731-AAS02909 represent human pregnane X receptor (hpXR) coding sequences and PCR primers of the invention. The human pregnane X receptor sequences are used to make antibodies, or a substance capable of binding specifically to the gene product of hPXR gene, for diagnosing and treating various diseases, such as cancer, with drugs that are substrates, inhibitors or modulators of the hPXR gene product. The proteins can be used to identify and obtain prodrugs and drugs for treatment of diseases which are amenable to chemotherapy. The nucleic acids can be used in gene therapy for the treatment or prevention of disorders associated with hPXR expression
mini-ribozymes and the dimer they form can be used for cleavage and inactivation of RNA. They are also useful as agents for treatment or diagnosis of a genetic disease. The present sequence was disclosed in the sequence ID listing of the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel variant of the human pregnane X receptor gene, associated with insufficient metabolization and/or sensitivity to drugs, is useful for diagnosing and treating diseases with drugs that are modulators of their gene product.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human, pregnane X receptor; hPXR; PCR primer; diagnostic; cancer; therapeutic; chemotherapy; gene therapy; ss.
                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                     Score 7.8; DB 1; Length 11;
Pred. No. 2.6e+02;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 7.8; DB 1; Length 11; Pred. No. 2.6e+02; 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human pregnane X receptor (hPXR) gene, PCR primer #99.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11 BP; 1 A; 5 C; 2 G; 3 T; 0 U; 0 Other;
                                                                                                                                                    Sequence 11 BP; 0 A; 7 C; 3 G; 0 T; 1 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (EPID-) EPIDAUROS BIOTECHNOLOGIE AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 37; Page 45; 108pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAS02829 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48.8%;
                                                                                                                                                                                                            48.8%;
81.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-SEP-2000; 2000WO-EP008827.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99EP-00118120
                                                                                                                                                                             Query Match
Best Local Similarity 81.00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9; Conservative
                                                                                                                                                                                                                                                                                                                                    1 099099960 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ч
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hustert
                                                                                                                                                                                                                                                                                                                                                                                               CGGGGGACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGAGCGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-273428/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 9; Conserv
```

```
The invention relates to in vitro identification (M1) of genes expressed in the skin of humans or animals by subjecting a mixture of genetically encoded factors from skin, to serial analysis of gene expression (SAGE) so as to identify skin-expressed genes and quantify their expression. (M1) is useful for identifying genes involved in skin homeostasis; to determine skin homeostasis and to test agent (A) that maintains or promotes skin homeostasis or that can be used for treating skin disorders, specifically neurodermatitis; sunburn; psoriasis; scleroderma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ichthyosis; atopic dermatitis; acne; seborrhea; lupus erythematosus; rosacea; melanoma; basal cell carcinoma; and carcinoma or sarcoma of the skin. The present sequence is that of a human expressed sequence tag (EST) of the invention
                                                                                                                                                                                                                                                                                                                                               In vitro identification of skin-expressed genes, useful for determining homeostasis and identifying cosmetic or pharmaceutical agents against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human, skin, dermatological, vulnerary, antipsoriatic, antiseborrhaeic, immunosuppressive, antiinflammatory, cytostatic, SAGE, neurodermatitis, psoriasis, dermatitis, skin cancer, EST; expressed sequence tag, 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48.8%; Score 7.8; DB 1; Length 11; 81.8%; Pred. No. 2.6e+02; tive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 11 BP; 1 A; 6 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                               Hofmann K;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 94; 1345pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Petersohn D, Conradt M, Hofmann K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP.
                                                                                                                              20-DEC-2001; 2001WO-EP015179.
                                                                                                                                                                       03-JAN-2001; 2001DE-01000127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-DEC-2001; 2001WO-EP015179.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                03-JAN-2001; 2001DE-01000127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABV63578 standard; cDNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                           Petersohn D, Conradt M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 81.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 066666666 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 ceracecec 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human skin EST 1364.
                                                                                                                                                                                                                (HENK ) HENKEL KGAA
                                                                                                                                                                                                                                                                                                      WPI; 2002-590638/63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HENK ) HENKEL KGAA
                                                                                                                                                                                                                                                                                                                                                                                          e.g. skin cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200253774-A2.
                                           WO200253774-A2
  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-JUL-2002.
                                                                                   11-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABV63578;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABV63578/c
a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AASO2731-AASO2909 represent human pregnane X receptor (hPXR) coding sequences and PCR primers of the invention. The human pregnane X receptor sequences are used to make antibodies, or a substance capable of binding specifically to the gene product of hPXR gene, for diagnosing and treating various diseases, such as cancer, with drugs that are substrates, inhibitors or modulators of the hPXR gene product. The proteins can be used to identify and obtain prodrugs and drugs for treatment of diseases which are amenable to chemotherapy. The nucleic acids can be used in gene therapy for the treatment or prevention of disorders associated with hPXR expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel variant of the human pregnane X receptor gene, associated with insufficient metabolization and/or sensitivity to drugs, is useful for diagnosing and treating diseases with drugs that are modulators of their gene product.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; skin; dermatological; vulnerary; antipsoriatic; antiseborrhaeic; immunosuppressive; antiinflammatory; cytostatic; SAGE; neurodermatitis; psoriasis; dermatitis; skin cancer; EST; expressed sequence tag; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                Human; pregnane X receptor; hPXR; PCR primer; diagnostic; cancer; therapeutic; chemotherapy; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48.8%; Score 7.8; DB 1; Length 11;
81.8%; Pred. No. 2.6e+02;
iive 0; Mismatches 2; Indels
                                                                                                                                                                                     Human pregnane X receptor (hPXR) gene, PCR primer #98.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 11 BP; 3 A; 2 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (EPID-) EPIDAUROS BIOTECHNOLOGIE AG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 37; Page 45; 108pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABV64705 standard; cDNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                   08-SEP-2000; 2000WO-EP008827.
                                                        AAS02828 standard; DNA; 11
                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-OCT-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 81.8 es 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wojnowski L, Hustert E;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGAGCGGCAT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-273428/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human skin EST 2491
                                                                                                                                                                                                                                                                                                                                            WO200120026-A2.
                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-SEP-1999;
                                                                                                                                            29-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                        22-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABV64705;
                                                                                                 AAS02828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
```

Best Loc Matches

8

ABV64705, RESULT

The second of the second of the

ö

Gaps

ö

```
ABV67255/
                                                                                                                                                                                                                                                                                                                                                                                     RESULT
8888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                           ਨੇ
                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                             The invention relates to in vitro identification (M1) of genes expressed in the skin of humans or animals by subjecting a mixture of genetically encoded factors from skin, to serial analysis of gene expression (SAGE) so as to identify skin-expressed genes and quantify their expression.

(M1) is useful for identifying genes involved in skin homeostasis; to determine skin homeostasis and to test agent (A) that maintains or promotes skin homeostasis and to test agent (A) that maintains or disorders, specifically neurodermatitis; sunburn; psoriasis, scleroderma; ichthyosis; atopic dermatitis; acne; seborrhea; lupus erythematosus; rosacea; melanoma; basal cell carcinoma; and carcinoma or sarcoma of the skin. The present sequence is that of a human expressed sequence tag (EST) of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to in vitro identification (MI) of genes expressed in the skin of humans or animals by subjecting a mixture of genetically encoded factors from skin, to serial analysis of gene expression (GAGE) so as to identify skin-expressed genes and quantify their expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; skin; dermatological; vulnerary; antipsoriatic; antiseborrhaeic; immunosuppressive; antiinflammatory; cytostatic; SAGE; neurodermatitis; psoriasis; dermatitis; skin cancer; EST; expressed sequence tag; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 In vitro identification of skin-expressed genes, useful for determining homeostasis and identifying cosmetic or pharmaceutical agents against
                                                     skin-expressed genes, useful for determining
                                                 In vitro identification of skin-expressed genes, useful for determinin homeostasis and identifying cosmetic or pharmaceutical agents against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 48.8%; Score 7.8; DB 1; Length 11 Best Local Similarity 81.8%; Pred. No. 2.6e+02; Matches 9; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 11 BP; 2 A; 4 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure; Page 210; 1345pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hofmann K;
                                                                                                                               Disclosure; Page 62; 1345pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-DEC-2001; 2001WO-EP015179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-JAN-2001; 2001DE-01000127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABV68857 standard; cDNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Σ̈́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GCGGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conradt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11 GCGTGCGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-590638/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human skin EST 6643.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HENK ) HENKEL KGAA
               WPI; 2002-590638/63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e.g. skin cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200253774-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Petersohn D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABV68857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo
```

요

ò

```
The invention relates to in vitro identification (M1) of genes expressed in the skin of humans or animals by subjecting a mixture of genetically encoded factors from skin, to serial analysis of gene expression (SAGE) so as to identify skin-expressed genes and quantify their expression.

(M1) is useful for identifying genes involved in skin homeostasis; to determine skin homeostasis and to test agent (A) that maintains or promotes skin homeostasis or that can be used for treating skin disorders, specifically neurodermatitis; sunburn, psoriasis, scleroderma; ichthyosis; atopic dermatitis; acne; seborrhea; lupus erythematosus; rosacea, melanoma; basal cell carcinoma; and carcinoma or sarcoma of the skin. The present sequence is that of a human expressed sequence tag
(MI) is useful for identifying genes involved in skin homeostasis; to determine skin homeostasis and to test agent (A) that maintenins or promotes skin homeostasis or that can be used for treating skin disorders, specifically neurodermatitis; sunburn; psoriasis; scleroderma;
                                                                                                              ichthyosis; atopic dermatitis; acne; seborrhea; lupus erythematosus; rosacea; melanoma; basal cell carcinoma; and carcinoma or sarcoma of the skin. The present sequence is that of a human expressed sequence tag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         In vitro identification of skin-expressed genes, useful for determining homeostasis and identifying cosmetic or pharmaceutical agents against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunosuppressive, antiinflammatory; cytostatic; SAGE; neurodermatitis; psoriasis; dermatitis; skin cancer; EST; expressed sequence tag; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; skin; dermatological; vulnerary; antipsoriatic; antiseborrhaeic;
                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                              ;
                                                                                                                                                                                                                                                                                                                                     Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 11;
                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11 BP; 0 A; 7 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                         Sequence 11 BP; 1 A; 5 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                  Score 7.8; DB 1;
Pred. No. 2.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 7.8; DB 1;
Pred. No. 2.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 164; 1345pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          χ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          M, Hofmann
                                                                                                                                                                                                                                                                                                                                                                                              .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
В
                                                                                                                                                                                                                                                                                                                                  48.8%;
81.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-DEC-2001; 2001WO-EP015179.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-JAN-2001; 2001DE-01000127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48.8%;
81.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABV67255 standard; cDNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      11
                                                                                                                                                                                                                of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conradt
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ටපිපටපපපටපපට
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCGCGGGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human skin EST 5041.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HENK ) HENKEL KGAA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-590638/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              e.g. skin cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200253774-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Petersohn D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-JUL-2002.
                                                                                                                                                                                                                                                                                                                                                                                              6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABV67255;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                (ESI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (EST)
                                                                                                                                                                                                                                                                                                                                                                                              Matches
```

#1

S

Wed May 10 10:49:51 2006

N

ò

Matches

ABV70999;

RESULT

```
The invention relates to a nucleic acid enzyme with modifiable RNA cleavage activity. More specifically the invention relates to a nucleic acid enzyme, trans maxizyme, which has selective and effective eradicating activity towards harmful cells by acquiring cleavage activity of a specific target RNA by recognition of the other RNA molecule. The enzyme of the invention is useful for cleaving target RNA and is useful in treating diseases caused by the target RNA. This polynucleotide sequence represents the heterodimeric maxizyme RNA substrate relating to the maxizyme enzyme of the invention
                                                                                                                                                                                                                                                     /bound_moiety= "MzL_RNA"
/note= "Forms a double-stranded region with nucleotides
24-20 of sequence AAL40460"
                                                                                                                                                                                                                                                                                                                                                                    /bound_moiety= "MzR_RNA"
/note=_"Forms a double-stranded region with nucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neisseria meningitidis lgtG "fixed" mutant gene disrupted polyC tract
                                                                                       Enzyme, modifiable RNA cleavage activity; maxizyme-constituting RNA; trans maxizyme; heterodimeric maxizyme RNA substrate; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A nucleic acid enzyme which has selective and effective eradicating activity towards harmful cells by acquiring cleavage activity of a specific target RNA by recognition of the other RNA molecule.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lipooligosaccharide immunotype; LOS immunotype; serogroup B; phase variation; fixed immunotype; homopolymeric nucleotide tract; vaccine; immunostimulant; meningococcal disease; Neisserial disease;
                                            Maxizyme related heterodimeric maxizyme RNA substrate sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48.8%; Score 7.8; DB 1; Length 11; 81.8%; Pred. No. 2.6e+02; tive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 11 BP; 0 A; 7 C; 3 G; 0 T; 1 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (DOKU-) DOKURITSU GYOSEI HOJIN SANGYO GIJUTSU SO
                                                                                                                                                                                                                                                                                                                                                                                                                 -1 of sequence AAL40465"
                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Fig 1; 17pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-OCT-2000; 2000JP-00313320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13-OCT-2000; 2000JP-00313320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADL16098 standard; DNA; 11
      19-SEP-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 81.8
les 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CGGCGGGCGGC 11
                                                                                                                                                                                                                                          /*tag=
                                                                                                                                                                                                                                                                                                                                                     /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGGGGGACGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-483792/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         JP2002119283-A.
                                                                                                                                                     Unidentified
                                                                                                                                                                                                                   misc_binding
                                                                                                                                                                                                                                                                                                                            misc binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADL16098;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADL16098/
    임
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ઠે
    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to in vitro identification (M1) of genes expressed in the skin of humans or animals by subjecting a mixture of genetically encoded factors from skin, to serial analysis of gene expression (SAGE) so as to identify skin-expressed genes and quantify their expression.

(M1) is useful for identifying genes involved in skin homeostasis, to determine skin homeostasis and to test agent (A) that maintains or promotes skin homeostasis or that can be used for treating skin disorders, specifically neurodermatitis; sunburn; psoriasis; scleroderma; ichthyosis; atopic dermatitis; acne; seborrhea; lupus erychematosus; rosacea; melanoma; basal cell carcinoma; and carcinoma or sarcoma of the skin. The present sequence is that of a human expressed sequence tag
                                                                                                                                                                                                                                                                                                                                                              Human; skin; dermatological; vulnerary; antipsoriatic; antiseborrhaeic; immunosuppressive; antiinflammatory; cytostatic; SAGE; neurodermatitis; psoriasis; dermatitis; skin cancer; EST; expressed sequence tag; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      In vitro identification of skin-expressed genes, useful for determining homeostasis and identifying cosmetic or pharmaceutical agents against
      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             48.8%; Score 7.8; DB 1; Length 11; ilarity 81.8%; Pred. No. 2.6e+02; Conservative 0; Mismatches 2; Indels
    Indels
  ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 11 BP; 2 A; 4 C; 4 G; 1 T; 0 U; 0 Other;
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hofmann K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 24; Page 282; 1345pp; German.
  ;
0
                                                                                                                                                                                           ABV70999 standard; cDNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAL40464 standard; RNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-DEC-2001; 2001WO-EP015179.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-JAN-2001; 2001DE-01000127
                                                                                                                                                                                                                                                                             (first entry)
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Petersohn D, Conradt M,
                                            GGCGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GCGGCCGCCAT 13
                                                                                  GCCGGGGCCA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (EST) of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 GCGTGCGCCAT
                                                                                                                                                                                                                                                                                                                        Human skin EST 8785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-590638/63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HENK ) HENKEL KGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    e.g. skin cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200253774-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                             21-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9;
. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-JUL-2002
```

ö

Gaps

ö

AAL40464;

AAL40464/C ID AAL404 XX AC AAL404 XX

RESULT 416

g ઠ

Query Match

Best Loc Matches

RESULT 418

```
The invention relates to a process for making a genetically engineered Neisserial strain (preferably Neisseria meningitidis serogroup B) in which the lippoligosaccharide (LOS) immunotype is fixed or locked. A feature of the meningococcal LOS is the reversible, high frequency switching of expression (phase variation) of terminal LOS structures, which is an obstacle to the development of a cross-protective vaccine based on the use of LOS as the antigen. The process of the invention involves engineering a Neisserial strain such that the homopolymeric nucleotide tract of a phase variable LOS synthesis gene (specifically GFA or ligid) is reduced in length (whilst maintening the open reading frame), resulting in gene expression which is less phase variable. The method of the invention can be used to produce a Neisserial strain with a liked L2 or L3 immunotype, which can be used in the manufacture of vaccines (particularly multivalent vaccines) against neisserial disease, especially meningococcal disease. The present sequence represents the disrupted polyc tract of the constitutively expressed Neisseria
mutant; lgtG; disrupted polyC tract; fixed; constitutive expression; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jennings MP, Poolman J;
                                                                                                    replace(2,C)
/*tag= a
/note= "This base is C in the wild-type lgtG gene"
                                                                                                                                              replace(5,C) /*tag= b //tag= b //tag= b //tag= b //tag= rania base is C in the wild-type lgtG gene" replace(8,C)
                                                                                                                                                                                                                          /*tag= c
/note= "This base is C in the wild-type lgtG gene"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 7.8; DB 1; Length 11; Pred. No. 2.6e+02; 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 meningitidis lgtG "fixed" mutant gene (ADL16103).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11 BP; 0 A; 8 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Goraj K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GLAX ) GLAXOSMITHKLINE BIOLOGICALS SA.
(UYQU ) UNIV QUEENSLAND.
                                                                                      Location/Qualifiers
                                   Neisseria meningitidis; strain 35E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 3; Page 28; 42pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Denoel P, Feron C,
                                                                                                                                                                                                                                                                                                                                                                                            2002GB-00018036.
2002GB-00018037.
2002GB-00018051.
2002GB-00020197.
2002GB-00020199.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-2002; 2002GB-00025531.
24-DEC-2002; 2002GB-00030164.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002GB-00030168.
2002GB-00030170.
                                                                                                                                                                                                                                                                                                                                            31-JUL-2003; 2003WO-EP008569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-MAR-2003; 2003GB-00005028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002GB-00025524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48.88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 81.8
Matches 9; Conservative
                                                                                                                                                                                                                        /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-180668/17.
                                                                                                                                                                                                                                                                           WO2004015099-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                           30-AUG-2002;
30-AUG-2002;
01-NOV-2002;
                                                                                                                                                                                                                                                                                                                                                                                            02-AUG-2002;
02-AUG-2002;
02-AUG-2002;
                                                                                                                                                                                                                                                                                                                                                                             02-AUG-2002;
                                                                                                                                                                                                                                                                                                            19-FEB-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Biemans R,
Weynants V;
                                                    Synthetic.
                                                                                                    mutation
                                                                                                                                                     mutation
                                                                                                                                                                                                        mutation
```

```
This invention describes a novel in vitro method for identifying genes
that are significant for hair-bearing skin in humans. The method
comprises recovering, from hair-bearing skin in first mixture of
genetically expressed (transcribed and optionally translated) factors
(1.e. proteins, mRNA or their fragments), recovering a second, similar
mixtures from skin on which hair does not grow and subjecting both
mixtures to serial analysis of gene expression (SAGS) to identify those
genes for which expression is markedly different between the two types of
skin. The invention also describes in vitro methods for determining
homeostasis of human hair-bearing skin and for determining activity of
cosmetic and pharmaceutical agents for use against disorders or
disturbances of the homeostasis of human hair-bearing skin. A biochip and
the method probes are also described for determining homeostasis. The
hair-bearing skin is from the scalp and the other skin is from the face.
The method allows identification of as many as possible of the genes
important for hair-bearing skin, and therefore of a very wide range of
cotential therapeutic and cosmetic agents. ADQ35184-ADQ36518 represent
human DNA Tag fragments used to identify genes associated with hair-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           In vitro identification of genes important for hair-bearing skin, useful for assessing homeostasis and in screening for pharmaceutical or cosmetic agents, based on differential expression analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                     expression; SAGE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                              Human hair-bearing skin-associated DNA fragment SEQ ID NO 104,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Holtkoetter O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48.8%; Score 7.8; DB 1; Length 11; 81.8%; Pred. No. 2.6e+02; rive 0; Mismatches 2; Indels
                                                                                                                                                             hair-bearing skin; human; serial analysis of gene e
homeostasis; cosmetic; pharmaceutical; biochip; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 11 BP; 0 A; 7 C; 2 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gassenmeier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 6; SEQ ID NO 104; 250pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADQ36384 standard; DNA; 11 BP.
                 ADQ35287 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                                                        20-DEC-2002; 2002DE-01060931.
                                                                                                                                                                                                                                                                                                                                                                          20-DEC-2002; 2002DE-01060931
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Schlotmann K,
                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12
                                                                                                                                                                                                                                                                                                                                                                                                                                Petersohn D, Schloumman Hofmann K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GGCGGGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11 GGGGGCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                              (HENK ) HENKEL KGAA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2004-518857/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                              DE10260931-A1
                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bearing skin.
                                                                                         23-SEP-2004
                                                                                                                                                                                                                                                                                                   08-JUL-2004.
                                                      ADQ35287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADQ36384/
ADQ35287
                                                    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

ö

Gaps

;

81.8%;

GGGCGCCATCG 15 11 GGGCGGCGCG 1

ហ

ò g

```
ADZ24803;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 421
ADZ24803/c
        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This invention describes a novel in vitro method for identifying genes that are significant for hair-bearing skin, a first mixture of comprises recovering, from hair-bearing skin, a first mixture of genetically expressed (transcribed and optionally translated) factors (i.e. proteins, mRNA or their fragments), recovering a second, similar mixtures from skin on which hair does not grow and subjecting both mixtures to serial analysis of gene expression (SAGS) to identify those genes for which expression is markedly different between the two types of homeostasis of human hair-bearing skin and for determining activity of cosmetic and pharmaceutical agents for use against disorders or disturbances of the homeostasis of human hair-bearing skin. A biochip and a test kit comprising solid support (flaxible or rigid) with immobilised probes are also described for determining necessions in mixturbances are also described for determining necessions. The method allows identification of as many as possible of the genes immobilised probes are also described for determining homeostasis. The hair-bearing skin is from the scalp and the other skin is from the face. The method allows identification of as many as possible of the genes important for hair-bearing skin, and therefore, of a very wide range of potential therapeutic and cosmetic agents. AD035518 represent constitute events.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     In vitro identification of genes important for hair-bearing skin, useful for assessing homeostasis and in screening for pharmaceutical or cosmetic agents, based on differential expression analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                hair-bearing skin; human; serial analysis of gene expression; SAGB;
homeostasis; cosmetic; pharmaceutical; biochip; ds.
                                                                          Human hair-bearing skin-associated DNA fragment SEQ ID NO 1201.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                            Gassenmeier T, Holtkoetter O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match

48.8%; Score 7.8; DB 1; Length 11;

Best Local Similarity 81.8%; Pred. No. 2.6e+02;

Matches 9; Conservative 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human facial skin-associated DNA fragment SEQ ID NO 619.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 11 BP; 0 A; 7 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; SEQ ID NO 1201; 250pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADQ32529 standard; DNA; 11 BP.
                                                                                                                                                                                                                                                                                                 20-DEC-2002; 2002DE-01060931.
                                                                                                                                                                                                                                                                                                                                          20-DEC-2002; 2002DE-01060931.
                                                                                                                                                                                                                                                                                                                                                                                                                          Schlotmann K,
                                     23-SEP-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-SEP-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GCCGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11 GGCGGGGCCA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                          Hofmann K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2004-518857/50.
                                                                                                                                                                                                                                                                                                                                                                              (HENK ) HENKEL KGAA
                                                                                                                                                                                                                DE10260931-A1
                                                                                                                                                                                                                                                                                                                                                                                                                          Petersohn D,
                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bearing skin.
                                                                                                                                                                                                                                                           08-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                              Conradt M,
ADQ36384;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADQ32529;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADQ32529
```

```
This invention describes a novel in vitro method for identifying genes that are significant for facial skin in humans. The method comprises that are significant for facial skin in humans. The method comprises contenting, from facials skin, a first mixture of genetically expressed (transcribed and optionally translated) factors (i.e. proteins, mRNA or their fragments), recovering a second, similar mixture from some other content from the state of the mixtures to serial analysis of gene expression of present and subjecting the mixtures to serial analysis of gene expression (SAGE) to identify those genes for which expression is markedly different between facial skin and the other tissue. The invention also describes and in vitro method for determining homeostasis of human facial skin; a test of in vitro method for determining homeostasis of human facial skin; a test of mimobilised probes that bind specifically to the factors of interest and a biochip for determining homeostasis of human facial skin. The products of the invention are also used in a method which determines activity of cosmetic and pharmaceutical agents for use against disorders or destruction of as many as possible of the genes important for facial contential therapeutic and cosmetic content and chus of a very wide range of potential therapeutic and cosmetic content and chus of a very wide range of potential therapeutic and cosmetic contents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            In vitro identification of genes important for facial skin, useful for assessing homeostasis and in screening for pharmaceutical or cosmetic agents, based on differential expression analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         agents. ADQ31911-ADQ35111 represent human DNA Tag fragments used to identify the facial skin-associated genes described in the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ss; haplotype mapping; SNP detection; tumor; cytostatic; neoplasm; immune disorder; cardiovascular disease; metabolic disorder; respiratory disease; musculoskeletal disease; renal disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
facial skin; human; serial analysis of gene expression; SAGB;
homeostasis; biochip; cosmetic; pharmaceutical; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schlotmann K, Gassenmeier T, Holtkoetter O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48.8%; Score 7.8; DB 1; Length 11; 81.8%; Pred. No. 2.6e+02; ive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human SNP detection related oligonucelotide #1770.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADQ31911-ADQ35111 represent human DNA Tag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11 BP; 1 A; 3 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 6; SEQ ID NO 619; 577pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                               20-DEC-2002; 2002DE-01060928.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-DEC-2002; 2002DE-01060928.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADZ24803 standard; DNA; 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-JUN-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 81.8
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCGGGGCA 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conradt M, Hofmann K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2004-518855/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HENK ) HENKEL KGAA
                                                                                                                                                                                                                DE10260928-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Petersohn D,
                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                 08-JUL-2004
```

ö

g ઠ

XXXEX8

```
97WO-US022017.
                                                                                                                                                                                 96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46.3%;
88.9%;
                                                                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                                                                                             WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 GGCGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 GGAGGGCGG
                           Key
modified_base
    Homo sapiens.
                                                                                                                                                       26-NOV-1997;
                                                                                                                                                                                   26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                       WO9823294-A1
                                                                                                                                04-JUN-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAV47326;
                                                                                                                                                                                                                                     Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                      gene polymorphism in drug-related genes such as aryl acetylamide deacetylase, arytalkylamine N-acetyl transferase or ATP-binding cassette, sub-family A (ABC1), member 1. The method is useful for analyzing haplotype. The method is useful for estimating the sensitivity or disease of a medicine or a foreign material, for selecting medicine for preventing or treating disease, for determining appropriate dosage of medicine for preventing or treating of treating adjeases, for datermining appropriate dosage of medicine for preventing or treating of its analyzing a drug ensitivity of the medicine, foreign material or disease. The diseases include malignant tumor, immune disorder circulatory disease, metabolic disease, kidney disease, respiratory disease and muscle associated disease. The method enables analysis of the individual differences related to the sensitivity of a medicine, using a haplotype, without using each single nucleotide polymorphism. The present sequence
                                                                                                                                                                                                                                                                                      Analyzing haplotype, by detecting polymorphism in drug-related genes, electing common polymorphism (CP), building haplotype block using CP, specifying CP within block, specifying tag polymorphism from CP within block.
                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a method of analyzing haplotype, by detecting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Secondary structure, mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              using each single nucleotide polymorphism. The present sequence represents a human SNP detection related oligonucelotide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antisense oligonucleotide 715, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match

48.8%; Score 7.8; DB 1; Length 11;
Best Local Similarity 81.8%; Pred. No. 2.6e+02;
Matches 9; Conservative 0; Mismatches 2; Indels
 nephrotropic; endocrine disease; genitourinary disease.
                                                                                                                                                                                                                                                Saito S, Nakamura Y, Kamatani N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11 BP; 2 A; 5 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                   Disclosure; SEQ ID NO 1770; 1290pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV47215 standard; DNA; 10 BP.
                                                                                                     10-SEP-2004; 2004WO-JP014784
                                                                                                                            30-SEP-2003; 2003JP-00342519.
28-MAY-2004; 2004JP-00158717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-NOV-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GCGGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11 GCGGCCCTAT 1
                                                                                                                                                                (RIKE ) RIKEN KK.
(STAG-) STAGEN CO LTD.
(SEKI/) SEKINE A.
                                                                                                                                                                                                                                                                         WPI; 2005-305936/31.
                                                                                                                                                                                                                                                Sekine A, Iida A,
                                                                                                                                                                                                          (IIDA/) IIDA A.
(SAIT/) SAITO S.
                                                  WO2005030952-A1
                         Homo sapiens.
                                                                           07-APR-2005.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV47215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 422
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
```

```
Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine AI receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the Gransmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung inflammation in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                              /*tag= a
/note= "contains phosphorothioate internucleotide
linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Secondary structure; mRNA; phosphorothioate backbone; G-protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antisense oligonucleotide 826, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 7.4; DB 1; Length 10; Pred. No. 2.8e+02; 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 1 A; 1 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          allergy, emphysema and cystic fibrosis
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV47326 standard; DNA; 10 BP.
```

```
(HEAL-) HEALTH RES INC
    30-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best
   ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine AI receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yeast, Saccharomyces cerevisiae, transcriptome, cell cycle, regulation, eukaryotic cell; antifungal, SAGE tag; gene expression; serial analysis of gene expression; probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         inflammation in humans or other animals e.g. asthma, pulmonary disease, allergy, emphysema and cystic fibrosis
                                                                                                                                                                                                                            Treating respiratory disease with antisense sequences directed against adenosine or bradyknin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
           1. .10
**tag= a
'note= "contains phosphorothioate internucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yeast tag for additional NORF chromosome 3 tag position 41645.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other;
  Location/Qualifiers
                                                                                                                                                                                                                                                                                    Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV50247 standard; DNA; 10 BP.
                                                                                                               97WO-US022017
                                                                                                                                    96US-00757024
                                                                                                                                                           (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-OCT-1998 (first entry)
                                              linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7 GCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GCGCCATGG 9
                                                                                                                                                                                                       WPI; 1998-322464/28.
 Key
modified_base
                                                                                                              26-NOV-1997;
                                                                                                                                    26-NOV-1996;
                                                                   WO9823294-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9832847-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV50247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                  Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 424
ò
```

```
Transcriptome is encoded by a DNA molecule comprising a yeast gene involved in cell cycle progression selected from the group of connannotated ORF (NORF) genes. SAGE (serial analysis gene expression) tags for highly expressed genes and NORF genes are given in AAVS0051 to AAVS0345. The present invention describes: (1) a method of using yeast genes to modulate the cell cycle which comprises administering to a cell genes to modulate the cell cycle which comprises administering to a cell an isolated DNA molecule comprising a yeast gene which is involved in cell cycle progression selected from differentially expressed genes (SAGE tags given in AAVS0051 to AAVS0345); (2) a method for screening candidate cell and monitoring expression of a yeast gene which is involved in cell cycle progression of a yeast gene which is involved in cell cycle progression which comprises hybridizing a probe comprising at least 10 contiguous nucleotides of a yeast gene which is differentially expressed between at least 2 phases selected from the log phase, the S phase and the GZ/M phase; and (4) a probe for ascertaining the phase in the cell cycle, where the probe comprises at least 14 contiguous nucleotides of a NORF gene (SAGE tags given in AAVS0051 to AAVS0345), or as an array of probes on a solid support
                                                                                                                                                                                                                                                                                                                                                               Yeast transcriptome - useful for modulating eukaryotic cell, for screening antifungal agents, and for identifying genes in cell cycle progression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primer, quantitation; genetic instability; tumour cell; detection; neoplastic transformation; carcinogenesis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                            (UYJO ) UNIV JOHNS HOPKINS SCHOOL MEDICINE
                                                                                                                                                                                                                          Vogelstein B, Kinzler KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 26; 44pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAX77470 standard; DNA; 10 BP.
98WO-US001216.
                                                                          97US-0035917P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   96US-00734973.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96US-00734973.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-AUG-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 88.5
es 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 CGGCGGGCG 9
                                                                                                                                                                                                                                                                                             WPI; 1998-427943/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US5912147 primer 14
                                                                                                                                                                                                                  Velculescu VE,
22-JAN-1998;
                                                                      23-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-OCT-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US5912147-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAX77470;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 425
```

```
WPI; 1999-069743/06.
                                                                                                                                                                          invention
                                                                                                                                                                                                                                                                                                                                                                                                    AAX53703;
                                                                 Example;
                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nyce JW;
                                           disease
                                                                                                                                                                                                                                            Best Loc
Matches
                            DNA
                                                                                                                                                                                                                                                                                                                                                               AAX53703
    ઠ
                                                                                                                                                                                                                                                                                                       엄
                                                                                                                                                                                                                                                                                                                                                                             This invention describes a novel method for quantitating genetic instability independent of microsatellite alterations by treating a comparising genomic DNA from tumour cells and genomic DNA (cf) xR2, where R is a purine selected from adenine and year in a nucleotide sequence (CG)xR2, where R is as in (i) and x = 3-7, (ii) a nucleotide sequence (CG)xR3, where R is as in (i) and x = 3-7, (iii) a nucleotide sequence (CG)xR3, where R is as in (i) and x = 3-7, (iv) a cutosine, thymine, and uracil and x = 3-7, (iv) a nucleotide sequence (CG)xR3, where R is a purine selected from cytosine, thymine, and uracil and x = 3-7, (v) a nucleotide sequence (CG)xR3, where R is a purine selected from denine and guanine and x = 6-16, (vii) a nucleotide sequence (CA)xR3, where R is a purine selected from denine and quanine and x = 6-16, (vii) a nucleotide sequence (CA)xR3, where R is a purine selected from cytosine, thymine, and uracil, and x = 6-16, (vii) a nucleotide sequence (CA)xR3, where R is a purine selected from cytosine, thymine, and uracil and x = 6-16, (vii) a nucleotide sequence (CA)xR3, where R is a purine selected from cytosine, thymine, and uracil and x = 6-16, (vii) a nucleotide sequence (CA)xR3, where Y is a pyrimidine selected from cytosine, thymine, and uracil and x = 6-16, and (ix) a combination of the primers The method is useful for detecting genomic instability which are commonly associated with the various stages of neoplastic content and carcinogenesis. The method is rapid and simple
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; cardiovascular disease; atherosclerosis; ischaemia; restenosis; reperfusion; hypertension; arterial inflammation; diagnosis; rchd528;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                        46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10 BP; 0 A; 5 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human interleukin-1 forward primer OPE7.
                                                                                         Claim 4; Col 21-22; 27pp; English
                                                                Quantitating genetic instability
            Basik M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAV81843 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95US-00458873.
96US-00599654.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96US-00616844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95US-00386844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-MAR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Conservative
             Stoler D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 GCGCGCGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-FEB-1995;
            Anderson G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US5849578-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV81843;
                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Falb DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
```

```
The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and non-coding regions of RNAs corresponding to target genes, gene initiation codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'
                                                                                                                                                                                                                                                                     of cardiovascular diseases, including: atherosclerosis; ischaemia; restenosis; reperfusion; hypertension; and arterial inflammation. The present sequence represents a primer used in an example from the present
                                                                                                                                                                The present invention describes rchd528 protein. A method has been developed for producing the rchd528 gene product. The present invention also describes methods and compositions for the treatment and diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Antisense oligonucleotide; multiple target; antisense treatment; impaired respiration; inflammation; lung disease; pulmonary vasconstriction; inflammation; altergic rhinitis; acute asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis; pulmonary hypertension; pulmonary vasconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antisense oligonucleotides used in treatment of, e.g. pulmonary
encoding rchd528 polypeptide - associated with cardiovascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 3 A; 3 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 40; 120pp; English.
                                                                                                Col 99; 122pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX53703 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98WO-US019419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97US-0059160P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 prostate cancer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6 GGCGGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GGCTGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vasoconstriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
```

```
eend and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AXX55272-74. These multiple target oligonucleotides diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases und conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstration, inflammation, respiratory allordome, pain, cytic fibrosis, pulmonary hypertension, pulmonary hypertension, pulmonary vasoconstration, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, pancer, pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The specification describes antisense oligonucleotides (AAX52869-X55271) directed against at least 2 mRNAs selected from target genes, coding and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pulmonary hypertension; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; leukemia; lymphoma; carcinoma; colon cancer; breast cancer; lung cancer; pancreatic cancer; hepatocellular carcinoma; kidney cancer; melanoma; hepatic metastasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antisense oligonucleotides used in treatment of, e.g. pulmonary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Antisense oligonucleotide, multiple target, antisense treatment, impaired respiration; inflammation; lung disease; pulmonary vasoconstriction; inflammation; allergy; actime; acted asthma; allergy; asthma; impeded respiration; respiratory distress syndrome; pain; cystic fibrosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human adenosine Al receptor antisense oligonucleotide fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 38; 120pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAX53592 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98WO-US019419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-0059160P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-JUL-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 GCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             prostate cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-229400/19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vasoconstriction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9913886-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAX53592;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAX53592
        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all codons, genomic flanking regions, intron-exon borders, the 5'-end, the 3'-end and the juxta-section between coding and non-coding regions and all segments of RNAs encoding proteins associated with one or more diseases, conditions or mixtures. The antisense oligonucleotides may be derived from sequences AAX5527-74. These multiple target oligonucleotides (specifically AAX5180-271) can be used for the antisense treatment of diseases and conditions. Typical diseases and conditions are those associated with impaired respiration and inflammation, including lung diseases, pulmonary vasoconstriction, inflammation, allergic rhinitis, acute asthma, allergies, asthma, impeded respiration, respiratory diseases syndrome, pain, cystic fibrosis, pulmonary hypertension, cultimass constructive pulmonary vasoconstriction, emphysema, chronic obstructive pulmonary disease (COPD), and cancers such as leukemias, lymphomas, carcinomas e.g. colon cancer, breast cancer, lung cancer, melanoma, hepatic metastases, as well as all types of cancers which may metastasize or have metastasized to the lungs, including breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a rchd502 target/fingerprint gene encoding a transmembrane protein. The invention provides cDNAs contained in plasmids pFCHD5028F (ATCC 69981) and pFCHD502SJ (ATCC 69982) that encode the rchd502 polypeptide, and are differentially expressed in cardiovascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fingerprinting gene; rchd502; transmembrane protein; cardiovascular; fingerprint/target gene; up-regulated; endothelial cell; shear-stress; atherosclerosis; ischemia; reperfusion; hypertension; restenosis; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New polynucleotides consisting of residues 1-1929 of the rchd502 gene are differentially expressed in cardiovascular disease states, and can therefore be used to treat and diagnose cardiovascular diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                        46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10 BP; 1 A; 1 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Col 9; 121pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAX26257 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96US-00599654.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95US-00386844.
95US-00485573.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-MAY-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GCCGGCCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Forward primer OPE7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-214071/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGGCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PCR primer; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-FEB-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US5882925-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX26257;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Falb DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 429
    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠ
```

```
ö
disease states. Cultured genetically engineered host cell containing the rech6502 polymucleotides in operative association with a nucleotide regulatory element are used for producing a polypeptide rch6502 gene product. Identifying that the fingerprint/target gene rch6502 is differentially expressed (up-regulated) by endothelial cells subjected to shear-stress, provides a tool for the diagnosis and treatment of cardiovascular disease e.g. atherosole-rosis, ischemia/reperfusion, hypertension, restenosis. The fingerprint gene is useful for testing the efficacy of candidate drugs in basic research and in clinical trials and or imaging of a diseased cardiovascular tissue. The gene may also be used in screening for ligands of target gene product receptor domains, as well as antagonists of the ligand-receptor interaction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention provides a human forkhead transcription factor gene, FKHL7. The FKHL7 protein can be produced by standard recombinant methodology. The products can be used for diagnosis, prognosis, monitoring, prevention and treatment of glaucoma. They can also be used for the production of transgenic animals and drug screening. Sequences AAZ38076.78 represent fragments of the FKHL7 gene, which when deleted or when mutations occur in this region, may cause or contribute to the development of glaucoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Forkhead transcription factor gene; FKHL7; treatment; glaucoma; human; transgenic animal; drug screening; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      isolated human forkhead transcription factor gene, FXHL7, used to, develop products for the diagnosis.
                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                            46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patil
                                                                                                                                                                                                                                                                                                                1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alward WLM, Stone EM, Nishimura D,
                                                                                                                                                                                                                                          Sequence 10 BP; 3 A; 3 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                               Pred. No. 2.8e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 58; 99pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ38077 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US008148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0081870P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-00083352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (IOWA ) UNIV IOWA RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated human forkhead
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-FEB-2000 (first entry)
                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 88...
Best Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human FKHL7 DNA fragment.
                                                                                                                                                                                                                                                                                                                                                    6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                    10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1999-620429/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sheffield VC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9953060-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-MAY-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .5-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ38077;
                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ38077
                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ઠે
```

```
The present invention describes a new composition comprising an antisense oligonucleotide (ON) with low adenosine (up to 15%), which targets onclide acids involved in bronchoconstriction, allergies, and/or antisathmatic. cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation, impaired airways, including lung diseases and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating c. e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive carcinomas, and cancers which may metastasise to the lungs, including breast and prostate cancer. The reduction of the adenosine content of the ONs reduces side effects. The A-containing ONs break down with the conclocutes side effects. The A-containing ONs break down with the conclocute sequences given in the sequence listing from the present to release of decyadenosine which activates adenosine receptors causing conclocution sequences given in the sequence listing from the present to release are also called SEQ ID NO:1 to 185, but the sequences of from the previously named sequences SEQ ID NO:1 to 185, but the sequences of from the previously named sequences SEQ ID NO:1 to 185, but the sequences of sequences given in the disclosure of the present invention. With their corresponding SEQ ID NO: sequences given in the disclosure of the present invention and with their corresponding SEQ ID NO: sequences given in the sequence given in the disclosure of the present invention and interpretating the present invention and interpretating the present invention and interpretating from the present invention and interpretation of the present invention and the disclosure of the present invention and interpretating the pres
                                                                                                                                                                                                                                                                                                                                                                              Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                                                                                                                                                                                                                                                                Low adenosine antisense oligonucleotide SEQ ID NO:835.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 18; Page 370; 1343pp; English.
                                                                                                                                                                             AAA33146 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                (first entry)
11
                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-205971/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200009525-A2
                                                                                                                                                                                                                                                                                28-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-FEB-2000.
                                                                                                                                                                                                                                AAA33146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nyce JW;
8
                                        g
```

Gaps

;

h 46.3%; Score 7.4; DB 1; Length 10; Similarity 88.9%; Pred. No. 2.8e+02; 8; Conservative 0; Mismatches 1; Indels

Query Match Best Local Similarity Matches 8; Conservat

Š 윱

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                         AAZ7781
         8888888
                                                                                                                                                                                                                                                                                                               셤
                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes a new composition composition.

In present invention describes a new composition composition targets

Inflammation. The ON can have antiinflammatory, antialergic, and/or

Inflammation. The ON can have antiinflammatory, antialergic, and/or

antiasthmatic, cytostatic and analgesic activities. The compositions are useful for the treatment of diseases associated with inflammation.

Cuseful for the treatment of diseases associated with inflammation, impaired airways, including lung disease and diseases whose secondary effects afflict the lungs of a subject. They can be used for treating of e.g. ischaemic conditions, pulmonary vasoconstriction, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, pulmonary hypertension, emphysema, chronic obstructive cypulmonary disease (COPD), and cancers sund as leukaemias, lymphomas, carcinomas, and cancers which may metastasise to the lungs, including carcinomas, and cancers which may metastasise to the lungs, including carcinomas, and cancers which may metastasis active demosine content of the ONB reduces side effects. The A-containing ONS break down with the concern side effects which activates adenosine receptors causing conclosuration and inflammation. AAA32313 to AAA35312 represent the nucleotide sequences given in the sequence listing from the present invention, which correspond to SEQ ID No:1 to 2815, and then the last 185 sequences are also called SEQ ID No:1 to 185, but the sequences differ
                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present invention describes a new composition comprising an antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; adenosine receptor; low adenosine antisense oligonucleotide; phosphorothioate; impaired respiration; inflammation; allergy; allergic disease; bronchoconstriction; inhibitor; antiinflammatory; antiallergic; antiasthmatic; cytostatic; analgesic; impaired airway; lung disease; ischaemic condition; pulmonary vasoconstriction; asthma; respiratory distress syndrome; pain; cystic fibrosis; emphysema; pulmonary hypertension; chronic obstructive pulmonary disease; COPD; cancer; leukaemia; lymphoma; carcinoma; metastasis; ss.
                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New antisense oligonucleotides useful for treating e.g. pulmonary vasoconstruction, inflammation, allergies, asthma, hypertension, bronchitis, emphysema, respiratory distress syndrome, ischemia or
                                                                                            ;
                                                Length 10;
                  46.3%; Score 7.4; DB 1; Length 10.88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                         Low adenosine antisense oligonucleotide SEQ ID NO:724.
Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 18; Page 357; 1343pp; English.
                                                                                                                                                                                                                                                                                      AAA33035 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0095212P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US017712.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYEC-) UNIV EAST CAROLINA
                  Query Match
Best Local Similarity 88.5.
8; Conservative
                                                                                                                                                                                                                                                                                                                                                                           28-JUL-2000 (first entry)
                                                                                                                              7 GCGCCATCG 15
                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-205971/18.
                                                                                                                                                                            GCGGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200009525-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-FEB-2000
                                                                                                                                                                                                                                                                                                                                  AAA33035;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancers.
                                                                                                                                                                                                                                          RESULT 432
င္ပ
```

```
ö
AAA33992) are specifically claimed ONs from the present invention. N.B. Sequences given in the disclosure of the present invention do not match up with their corresponding SEQ ID NO: sequences given in the sequence listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAGE tag; serial analysis of gene expression; antigen-presenting cell; APC; monocyte-derived dendritic cell; differential gene expression; immunostimulatory cofactor; costimulatory factor; CTL; cytotoxic T-lymphocyte; tumour antigen; immunotherapy; anticancer; ss.
                                                                                                                                                                                       Gaps
                                                                                                                                                                                       ö
                                                                                                                                              'Match 46.3%; Score 7.4; DB 1; Length 10; Local Similarity 88.9%; Pred. No. 2.8e+02; es 8; Conservative 0; Mismatches 1; Indels
                                                                                                        Sequence 10 BP; 1 A; 1 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human dendritic cell SAGE tag, SEQ ID NO:240.
                                                                                                                                                                                                                                                                                                                                                          AAZ77812 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0089844P.
98US-0089853P.
98US-0089878P.
98US-0089991P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98US-0089993P.
98US-0089994P.
98US-0089997P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0090048P.
98US-0090072P.
98US-0090076P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-008999PP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0090000P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0090035P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0090036P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0090039P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0090040P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0090041P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0090043P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0090044P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0090045P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0090077P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0090078P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0090080P
                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                         2 GGCGGGCGG 10
                                                                                                                                                                                                                                                           GGAGGCCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GENZ ) GENZYME CORP.
(ROBE/) ROBERTS B L.
(SHAN/) SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                     10-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W09965924-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .9-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .9-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                               AAZ77812;
                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -NUL-61
                                                                                                                                                                                                                                                                                                                      RESULT 433
```

23-DEC-1999

```
Sequences AAZ77573-Z79709 represent SAGE (serial analysis of gene expression) tags used to identify mRNA transcripts encoding immunostimulatory cofector proteins which are preferentially or differentially expressed in monocyte-derived dendritic cells compared with monocytes. Some of the transcripts correspond to known genes or ESTs (expressed equence tags) which were previously unknown to be conferentially or differentially expressed in dendritic cells, while preferentially or differentially expressed in dendritic cells, while other transcripts correspond to novel genes. Antigen-presenting cell (APC)-associated costimulatory factors play an important role in the activation of the cytotoxic immune response, particularly against tumour cells, immunostimulatory cofectors also being required for insufficient to activate a robust cytotoxic immune response that can lyse the tumour cells, immunostimulatory cofectors also being required for efficient activation of cytotoxic T-lymphocytes (CTLs). Nucleic acid sequences identified using the SAGE tags have several potential uses. They may be used in vaccines to induce an immune response, particularly against a tumour antigen; to modulate the genotype of an APC; to screen for against a tumour antigen; to modulate the genotype of an APC; to screen APC; and as hybridisation probes/amplification primers for the diagnosis and monitoring of diseases related to abnormal companies of these genes. Detection of the dendritic cell differentially expressed genes in an APC; and as hybridisation probes/amplification primers for the cypressed genes, or of their encoded proteins, can be used to identify expressed genes or of their encoded proteins, can be used in active immunotherapy (or to stimulate production of a cypoulation of antigen-specific effector cells) and vectors containing them are used in gene therapy. Co-administration of tumour antigens and containing them are used in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                Isolated polynucleotides differentially expressed in antigen-presenting cells, useful in gene vaccines against cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   presentation to endogenous ÅPCs and upregulates the APCs for the presentation of co-efficientiatory signals, migration to T cell-rich sites, secretion of T cell growth factors and secretion of chemokines for recruitment of immune effector cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SAGE tag; serial analysis of gene expression; antigen-presenting cell; APC; moncoyte-derived dendritic cell; differential gene expression; immunostimulatory cofactor; costimulatory factor; CTL; cytotoxic T-lymphocyte; tumour antigen; immunotherapy; anticancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 1 A; 4 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human dendritic cell SAGE tag, SEQ ID NO:476.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                    Claim 1; Page 71; 130pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ78048 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 88.9
Matches 8; Conservative
Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 CGACGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CGCCGGCG 9
                                                                        WPI; 2000-106077/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ78048;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match
```

ò

WO9965924-A2

```
Sequences AAZTY573-ZY9109 represent SAGE (serial analysis of gene expression) tags used to identify mRNA transcripts encoding immunostimulatory cofactor proteins which are preferentially or differentially expressed in monocyte-derived dendritic cells compared with monocytes. Some of the transcripts correspond to known genes or BSTs (expressed sequence tags) which were previously unknown to be preferentially or differentially expressed in dendritic cells, while contex transcripts correspond to novel genes. Antigen-presenting cell other transcripts correspond to novel genes. Antigen-presenting cell other cytotoxic immune response, particularly against tumour cells. Thuour antigen presentation by 1-cell receptors is alone activation of the cytotoxic immune response, particularly against tumour cells. Immunostimulatory cofactors also being required for ceflicient to activate a robust cytotoxic immune response that can lyse insufficient to activate a robust cytotoxic immune response that can lyse cefficient activation of cytotoxic 1-lymphocytes (CTLs). Nucleic acid sequences identified using the SAGE tags have several potential uses. They may be used in vaccines to induce an immune response, particularly against a tumour antigen; to modulate the genotype of an APC; to screen for agents that modulate expression of diseases related to abnormal expression of these genes. Detection of the dendritic cell differentially expression of these genes. Detection of the dendritic cells as belonging to the monocyte lineage. Cells containing these genes can be used in active immunotherapy (or to stimulate production of a cells as belonging to the monocyte lineage. Cells containing these genes containing can be used in active immunotherapy (etcls) and vectors containing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isolated polynucleotides differentially expressed in antigen-presenting cells, useful in gene vaccines against cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequences AAZ77573-Z79709 represent SAGE (serial analysis of gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 78; 130pp; English.
                                                                                                                                                                98US-0089993P.
98US-0089994P.
98US-0089997P.
                                                                                                                                                                                                                                 98US-0090000P.
98US-0090035P.
98US-0090036P.
                                                                                                                                                                                                                                                                                                                   98US-0090041P.
98US-0090042P.
98US-0090043P.
                                                                                                                98US-0089878P.
98US-0089991P.
98US-0089992P.
                                                                                                                                                                                                                                                                                                                                                                                                    98US-0090047P.
98US-0090048P.
98US-0090072P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0090077P.
98US-0090078P.
98US-0090079P.
                                                                                                                                                                                                                 98US-0089999P.
                                                                                                                                                                                                                                                                                    98US-0090039P.
                                                                                                                                                                                                                                                                                                                                                                     98US-0090044P.
                             99WO-US013800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0090080P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GENZ ) GENZYME CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ROBERTS B L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-106077/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SHAN/) SHANKARA S.
                                                                                                                                                                                                                                  19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                               18-JUN-1999;
                                                                                                                                19-400-61
19-400-61
                                                                                                                                                                19-JUN-1998
                                                                                                                                                                                                                    .9-JUN-1998
                                                                                                                                                                                                                                                                                    19-400-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JUN-1998;
                                                                                                                                                                                                   19-JUN-1998
                                                                                                                                                                                                                                                                                                                     9-JUN-1998
                                                                                                                                                                                                                                                                                                                                     9-JUN-1998
                                                                                                                                                                                                                                                                                                                                                       19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                          19-JUN-1998
                                                                                                                  19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                        19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                        19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                           19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ROBE/)
                                                                                                NDD-6
                                                                                                                                                                                                                                                                                                                                                                                                                                         NULD-61
```

WPI; 2000-106077/09

(SHAN/) SHANKARA S.

Roberts BL,

```
;
0
them are used in gene therapy. Co-administration of tumour antigens and APC-associated costimulatory factors ensures adequate antigen presentation to endogenous APCs and upregulates the APCs for the presentation of co-stimulatory signals, migration to T cell-rich sites, secretion of T cell growth factors and secretion of chemokines for recruitment of immune effector cells
                                                                                                                                                                                                                                                                                                                          SAGE tag; serial analysis of gene expression; antigen-presenting cell; APC; monocyte-derived dendritic cell; differential gene expression; immunostimulatory cofactor; costimulatory factor; CTL; cytotoxic T-lymphocyte; tumour antigen; immunotherapy; anticancer; ss.
                                                                                                                                Gaps
                                                                                                                                .
0
                                                                                                     46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ative 0; Mismatches 1; Indels
                                                                                                                             1; Indels
                                                                             Sequence 10 BP; 2 A; 3 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                    Human dendritic cell SAGE tag, SEQ ID NO:205.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0089831P.
98US-0089844P.
98US-0089987BP.
98US-0089991P.
98US-0089993P.
98US-0089993P.
98US-008993P.
98US-008993P.
98US-008093P.
98US-009003P.
98US-0090041P.
                                                                                                                                                                                                                                 AAZ77777 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                               10-APR-2000 (first entry)
                                                                                                                Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                  8 CGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GENZ ) GENZYME CORP. (ROBE/) ROBERTS B L.
                                                                                                                                                                       ceccreer 2
                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                         WO9965924-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9-NUL-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .9-JUN-1998
                                                                                                                                                                                                                                                        AAZ7777;
                                                                                                     Query Match
                                                                                                                                                                                                          RESULT 435
                                                                                                                            Matches
 888888888
                                                                                                                                                   δ
                                                                                                                                                                       g
```

```
Sequences AAZ7573-Z79709 represent SAGE (serial analysis of gene expression) tags used to identify mRNA transcripts encoding cimmunostimalatory cofactor proteals which are preferentially or differentially expressed in monocyte-derived dendritic cells compared with monocytes. Some of the transcripts correspond to known genes or ESTS (expressed sequence tags) which were previoually unknown to be correspond to novel genes. Antigen-presenting cell corporation of the cytocoxic immune response, particularly against tumour cells. Tumour antigen presentation via the MHC (major histocompatibility complex) and subsequent recognition by T-cell receptors is allone complex) and subsequent recognition by T-cell receptors is allone complex) and subsequent recognition by T-cell receptors is allone complex, and subsequent recognition by T-cell receptors is allone complex, and subsequent recognition by T-cell receptors is allone complex, and subsequent recognition by T-cell receptors is allone complex, and subsequent recognition by T-cell receptors is allone complex, and subsequent recognition of cyctoxic immune response that can lyse chieficient activation of cyctoxic T-lymphocytes (TTLS). Nucleic call cefficient activation of cyctoxic T-lymphocytes (TTLS). Nucleic call cefficient activation of cyctoxic T-lymphocytes (TTLS). Nucleic call of conditions and subvidisation probes/ amplification primers for the appressed genes in the sequences identify the sequences of disgnosis and monitoring of diseases related to abnormal complex progressed genes, or of their encoded proteins, can be used to identify expressed genes, or of their encoded proteins, can be used to active immunotherapy (or to stimulate production of antigen specific effector cells) and vectors containing them are used in gene therapy. Cells containing these genes containing the active immunotherapy (or to stimulate production of constimulatory factors enaures adequate antigen presentation of antigen specific effector cells) and vectors containing presentation of cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                             Isolated polynucleotides differentially expressed in antigen-presenting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; rchd005 gene; differential expression; HUVEC; endothelial cell; cardiovascular disease; diagnosis; therapy; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.3%; Score 7.4; DB 1; Length 10; llarity 88.9%; Pred. No. 2.8e+02; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 0 A; 5 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Forward primer OPE7 used in differential display.
                                                                                                                                                      cells, useful in gene vaccines against cancer.
                                                                                                                                                                                             Claim 1; Page 69; 130pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAA88594 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ceeceeece
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US6124433-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-SEP-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA88594;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAA88594/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
g
```

から まる (株) こうかん (株) という

```
AAZ80767 to AAZ83941 represent tags corresponding to distinct transcripts that are preferentially transcribed in the metastatic breast tumour cells. AAZ86972 tissue (i.e. are upregulated in metastatic breast tumour cells). AAZ86577 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). These transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and creatment of breast cancer, particularly where metastatic Diagnosis is compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. therapeutic genes (also ribosymes or antisense sequences), particularly an antigen-encoding sequence for use in gene or cell-based vaccines, for diagnosing breast cancer and for raising specific antibodies (AA). Ab are used to detect the polypeptides or as therapeutic agents. Host cells that produce the polypeptides can be used to expand and isolate populations of educated, antigen-specific immune effecter immunotherapy
                                                                             Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Metastatic breast tumour cell upregulated transcript tag #1612.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 2 A; 3 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                 Claim 1; Page 63; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0089853P.
98US-0089997P.
98US-0090039P.
98US-0090040P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US013647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ82378 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8; Conservative
Roberts BL, Shankara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GENZ ) GENZYME CORP. (ROBE/) ROBERTS B L.
                                                                                                                          treatment of cancer.
                                        WPI; 2000-106079/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 GGCTGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ82378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAZ82378
    à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                       Novel isolated rchd502 polypeptides, differentially expressed in response to endothelial cell shear stress, used for diagnosis, monitoring clinical trails, and treating cardiovascular diseases such as ischemia.
                                                                                                                                                                                                                                                                                                                                                                                                            This oligonucleotide was used as forward primer, with the reverse primer given in AAA88555, in a differential display analysis of interleukin-1 activated HUVEC. mRNA prepared from control HUVEC and from HUVEC treated for 1 or 6 hr with 10 U/ml 11-1 was subjected to analysis. The novel human gene rchd005 (see AAA88580) was identified, which is up-regulated in IL-1 activated HUVEC. rchd005 is 1 of 8 novel human genes of the invention (see AAA88560) was about the spense of the invention (see AAA885683) contacts as a point differentially expressed in cardiovascular disease states, and which are of diagnostic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Metastatic breast tumour cell upregulated transcript tag #185.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 BP; 3 A; 3 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 7.4; DB 1;
Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                         Example 8.2; Col 9; 123pp; English.
                                                                                                                                         (BGHM ) BRIGHAM & WOMENS HOSPITAL. (MILL-) MILLENNIUM PHARM INC.
                                                          95US-00386844.
95US-00485573.
96US-00599654.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0089853P.
98US-0089997P.
98US-0090039P.
98US-0090040P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ80951 standard; DNA; 10 BP.
                   97US-00944496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-US013647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8; Conservative
                                                                                                                                                                                                          Gimbrone MA, Falb DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENZYME CORP.
ROBERTS B L.
SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 8; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10 GGCTGCATC 2
                                                                                                                                                                                                                                              WPI; 2000-611017/58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      therapeutic use
                                                       10-FEB-1995;
07-JUN-1995;
09-FEB-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                   06-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAZ80951;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ROBE/)
(SHAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GENZ)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ80951/
```

셤

```
07-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ното варіеля
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ85562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ85562
      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ80767 to AAZ83941 represent tags corresponding to distinct transcripts that are preferentially transcribed in the metastatic breast tumour calls). AAZ83942 to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour calls). These transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and treatment of breast cancer, particularly where metastatic. Diagnosis is by standard immunoassays or hybridisation/amplification reactions. Compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. therapeutic genes (also ribozymes or antisense sequences). particularly an antigen-encoding sequence for use in gene or cell-based vaccines, for diagnosing breast cancer and for raising specific to antibodies (Ab). Ab are used to detect the polypeptides or as therapeutic and isolate populations of educated, antigen-specific immune effecter functional and isolate populations of educated, antigen-specific immune effecter functional function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                           Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human, metastatic breast tumour tissue; breast cancer; tag; primer;
non-metastatic breast tumour tissue; gene therapy; anticancer;
antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Metastatic breast tumour cell downregulated transcript tag #3188.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10 BP; 0 A; 6 C; 2 G; 2 T; 0 U; 0 Other;
                                                                                                                                                         Claim 1; Page 101; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0089853P.
98US-0089997P.
98US-0090039P.
98US-0090040P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA283954 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99WO-US013647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 88.9
                               Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 GGCGGGCGG 10
                                                                                                                              treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 GCCGGCCAG 1
(SHAN/) SHANKARA S.
                                                               WPI; 2000-106079/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ83954;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ83954
ઠ
```

```
AAZB0767 to AAZB3941 represent tags corresponding to distinct transcripts that are preferentially transcribed in the metastatic breast tumour cells). AAZB3942 to AAZB6677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). AAZB6677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). These tissue (i.e. are downregulated in metastatic breast tumour cells). These transcripts can be used for diagnosis, monitoring and creamment of breast cancer, particularly amplification reactions.

Compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcribts are used to direct expression, in selected cell types, of cell thanscribts are used to direct expression, in selected cell types, of particularly an antigen-encoding sequence for use in gene or cell-based vaccines; for diagnosing breast cancer and for raising specific cantibodies (Ab). Ab are used to detect the polypeptides or as therapeutic agents. Host cells that produce the polypeptides can be used to expand and isolate populations of educated, antigen-specific immune effecter cells, e.g. cytotoxic T lymphocytes, and these used for adoptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                             Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metastatic breast tumour cell downregulated transcript tag #4796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10 BP; 1 A; 4 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 144; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0089853P.
98US-0089997P.
98US-0090039P.
98US-0090040P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US013647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dest Match
Best Local Similarity 88.9%,
Best Local Similarity 88.9%,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ85562 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                            Roberts BL, Shankara S;
(GENZ ) GENZYME CORP.
(ROBE/) ROBERTS B L.
(SHAN/) SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 CGACGGGCG 10
                                                                                                                                                                                                                                                                                                                                                                                          treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 cecceece 9
                                                                                                                                                                                                                                     WPI; 2000-106079/09
```

```
18-JUN-1999;
                           19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-DEC-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ83218;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                          (SHAN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 442
        à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               that are preferentially transcribed in the metastatic breast tumour tables. The state of the sta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ80767 to AAZ83941 represent tags corresponding to distinct transcripts
                                                                                                                                                                                                                                                            Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Metastatic breast tumour cell downregulated transcript tag #5555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 10 BP; 0 A; 5 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 7.4; DB 1;
Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 187; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ86321 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0089853P.
98US-0090041P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US013647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8; Conservative
                                                                                                                                                        Roberts BL, Shankara S;
                                              (GENZ ) GENZYME CORP. (ROBE/) ROBERTS B L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 ceceecce 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 096099906 9
                                                                                                                                                                                                                                                                                                                treatment of cancer.
                                                                                                    SHAN/) SHANKARA S.
                                                                                                                                                                                                           WPI; 2000-106079/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mmunotherapy
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAZ86321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAZ86321/C
AAZ86321/C
XX
AC
AAZ8632
XX
AC
AAZ863
DT
OT-APR
XX
KW
HUMan;
KW
non-me
KW
AN
OS
HOMO 8
XX
XX
YX
YX
YX
YX
PP
PD
23-DEC
XX
XX
PP
PD
XX
PD
XX
PP
PD
XX

  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ò
```

```
that are preferentially transcribed in the metastatic breast tumour cells.

that are preferentially transcribed in the metastatic breast tumour cells. AAZ89342

to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). These transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and transcripts are meduated immunoassays or hybridisation/amplification reactions.

Compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. therapeutic genes (also ribozymes or antisense sequences)

continually an antigen-encoded by the transcripts are also useful in vaccines; for diagnosing breast cancer and for raising specific antibodies (AA). Ab are used to detect the polypeptides or as therapeutic and isolate populations of educated, antigen-specific immune effecter cells, e.g. cytotoxic T lymphocytes, and these used for adoptive immunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Metastatic breast tumour cell upregulated transcript tag #2452.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10 BP; 0 A; 6 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 205; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ83218 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.3%;
                              98US-0090040P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US013647.
98US-0090039P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                              Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 GGCGGGCGG 10
                                                                                                                                                          (GENZ ) GENZYME CORP. (ROBE/) ROBERTS B L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-106079/09.
                                                                                                                                                                                                                                            SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            geceeccee
```

```
18-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
        셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ80767 to AAZ83941 represent tags corresponding to distinct transcripts that are preferentially transcribed in the metastatic breast tumour cells). AAZ83942 tissue (i.e. are upregulated in metastatic breast tumour cells). AAZ83942 to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour citissue (i.e. are downregulated in metastatic breast tumour cells). These transcripts can be used for diagnosis, monitoring and treatment of breast cancer, particularly where metastatic. Diagnosis is by standard immunoassays or hybridisation/amplification reactions.

Compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. therapeutic genes (also ribozymes or antisense sequences).

Compounds that modulate encoded by the transcripts are also useful in vaccines; for diagnosing breast cancer and for raising specific vaccines; for diagnosing breast cancer and for raising specific antibodies (Ab). Ab are used to detect the polypeptides or as therapeutic and isolate populations of educated, antigen-specific immune effecter in immune effecter in immune effecter in immune in immune in immune in immune in immune immun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                          Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; metastatic breast tumour tissue; breast cancer; tag; primer;
non-metastatic breast tumour tissue; gene therapy; anticancer;
antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Metastatic breast tumour cell upregulated transcript tag #1555.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 1 A; 5 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                           Claim 1; Page 125; 219pp; English.
98US-0089853P.
98US-0089997P.
98US-0090039P.
98US-0090040P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ82321 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                             Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 88.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3 GCGGGCGGC 11
                                                                                                 GENZYME CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9 GCGGGCTGC 1
                                                                                                                                                                                                                                                           treatment of cancer.
                                                                                                                             SHANKARA S.
                                                                                                                                                                                            WPI; 2000-106079/09.
 19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                  19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9965928-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-DEC-1999
                                                                                              (GENZ ) G
(ROBE/) F
(SHAN/) 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ82321;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAZ82321
   ò
```

```
that are preferentially transcribed in the metastatic breast tumour that are preferentially transcribed in the metastatic breast tumour cells). AAZ83942 to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). AAZ83942 to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour tissue (i.e. are downregulated in metastatic breast tumour cells). These transcripts can be used for diagnosis, monitoring and treatment of breast cancer, particularly where metastatic. Diagnosis is by standard immunoassays or hybridisation/amplification reactions.

Compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcribts are used to direct expression, in selected cell types, of c.g. therapeutic genes (also ribosymes or antisense sequences), particularly an antigen-encoding sequence for use in gene or cell-based vaccines; for diagnosing breast cancer and for raising specific crantibodies (Ab). Ab are used to detect the polypeptides or as therapeutic agenties. Host cells that produce the polypeptides can be used to expand and isolate populations of educated, antigen-specific immune effecter cells, cells, cells, and these used for adoptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Metastatic breast tumour cell downregulated transcript tag #4768.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 BP; 3 A; 2 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 100; 219pp; English.
                                                                    98US-0089853P.
98US-0089997P.
98US-0090039P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽.
99WO-US013647
                                                                                                                                                                              98US-0090040P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ85534/c
ID AAZ85534 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                      Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                   GENZYME CORP.
                                                                                                                                                                                                                                                                                                            (ROBE/) ROBERTS B L. (SHAN/) SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGAGGCATC 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-106079/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9965928-A2.
                                                                                                                                         19-JUN-1998;
                                                                                                                                                                                                              19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                        19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ85534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                   (GENZ)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 444
```

```
98US-0089997P.
98US-0090039P.
98US-0090040P.
98US-0090041P.
                                                   99WO-US013647.
                                                                          98US-0089853P.
                                                                                                                                                                                                 Roberts BL, Shankara S;
                                                                                                                                                  (GENZ ) GENZYME CORP.
                                                                                                                                                             ROBERTS B L.
                                                                                                                                                                                                                        WPI; 2000-106079/09.
                                                                                                                                                                          (SHAN/) SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         immunotherapy
  WO9965928-A2
                                                 18-JUN-1999;
                                                                                                            19-JUN-1998;
                                                                           19-JUN-1998;
                                                                                       , 9661-NUC-61
, 9661-NUC-61
                          23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ81263;
                                                                                                                                                             (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAZ81263
  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             that are preferentially transcribed in the metastatic breast tumour cells. that are preferentially transcribed in the metastatic breast tumour cells. that are the pregulated in metastatic breast tumour cells. AZ283942 to AZ286677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells. These transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breat cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. therapeutic genes (also ribozymes or antisense sequences).

Compounds that antigen-encoding sequence for use in gene or cell-based vaccines; for diagnosing breast cancer and for raising specific antibodies (Ab). Ab are used to detect the polypeptides can be used to expand and isolate populations of educated, antigen-specific immune effecter cells, e.g. cytotoxic T lymphocytes, and these used for adoptive immunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                     Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Metastatic breast tumour cell upregulated transcript tag #60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10 BP; 0 A; 5 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                       Claim 1; Page 186; 219pp; English.
                                                          98US-0089997P.
98US-0090039P.
98US-0090040P.
98US-0090041P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAZ80826 standard; DNA; 10 BP.
                         99WO-US013647
                                                98US-0089853P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8; Conservative
                                                                                                                                                                       Roberts BL, Shankara S;
                                                                                                                       GENZYME CORP. ROBERTS B L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CGGCGGGCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 CGGCAGGCG 2
                                                                                                                                                                                                WPI; 2000-106079/09.
                                                                                                                                                                                                                                                  treatment of cancer,
                                                                                                                                               SHAN/) SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                        18-JUN-1999;
                                                                         19-01-NUL-61
                                                                                              19-JUN-1998
                                                19-JUN-1998
                                                             19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAZ80826;
                                                                                                                       (GENZ )
(ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
```

```
Compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. therapeutic genes (also ribozymes or antisense sequences), particularly an antigen-encoding sequence for use in gene or cell-based vaccines; Polypeptides encoded by the transcripts are also useful in antibodies (Ab). Ab are used to detect the polypeptides or as therapeutic antibodies (Ab). Ab are used to detect the polypeptides or as therapeutic and isolate populations of educated, antigen specific immune effecter cells, e.g. cytotoxic T lymphocytes, and these used for adoptive
                                                                                                                                                                                                                                                      AAZ80767 to AAZ83941 represent tags corresponding to distinct transcripts that are preferentially transcribed in the metastatic breast tumour tissue (i.e. are upregulated in metastatic breast tumour cells). AAZ83942 to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour tissue (i.e. are downregulated in metastatic breast tumour cells). These transcripts can be used for diagnosis, prognosis, monitoring and treatment of breast cancer, particularly where metastatic. Diagnosis is by standard immunoassays or hybridisation/amplification reactions.
Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; metastatic breast tumour tissue; breast cancer; tag; primer; non-metastatic breast tumour tissue; gene therapy; anticancer; antimetastatic; vaccine; diagnosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Metastatic breast tumour cell upregulated transcript tag #497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                        Claim 1; Page 59; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAZ81263 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               σ
                                                                                           treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 GGCGGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGCAGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
```

```
28-OCT-1998;
                                                            12-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-MAY-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA56254;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAS6254/
ID AAAS
   #X#XBX#X#XXXX#X#X#X#
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                             AA280767 to AAZ83941 represent tags corresponding to distinct transcripts that are preferentially transcribed in the metastatic breast tumour cells). AAZ83942 to AAZ86677 represent tags corresponding to distinct transcripts that are preferentially transcribed in the primary or non-metastatic breast tumour cells). These transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and transcripts can be used for diagnosis, prognosis, monitoring and compounds that modulate expression of the transcripts are potentially useful for treatment of (metastatic) breast cancer, while promoters from the transcripts are used to direct expression, in selected cell types, of e.g. therapeutic genes (also ribozymes or antisense sequences). Particularly an antigen-encoding sequence for use in gene or cell-based vaccines. Polypeptides encoded by the transcripts are also useful in vaccines for diagnosing breast cancer and for raising specific antibodies (Ab). Ab are used to detect the polypeptides or as therapeutic and isolate populations of educated, antigen-specific immune effecter cells, e.g. calls, e.g. cytotoxic T lymphocytes, and these used for adoptive immunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                          Isolated polynucleotides differentially expressed between metastatic and non-metastatic breast cancer cells, useful for diagnosis, prevention and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; dendritic cell; monocyte; immune system; diagnosis; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human dendritic cell cDNA base sequence oligonucleotide #78.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10 BP; 0 A; 4 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                         Claim 1; Page 71; 219pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                autoimmune disease; tumour; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAC73991 standard; cDNA; 10 BP.
                                                                                         98US-0089853P.
98US-0089997P.
98US-0090039P.
98US-0090040P.
                                                                    99WO-US013647.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-FEB-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8; Conservative
                                                                                                                                                                                                              Roberts BL, Shankara S;
                                                                                                                                                               GENZYME CORP. ROBERTS B L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 cecceece 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CGGCGGGCG 9
                                                                                                                                                                                                                                                                                     treatment of cancer.
                                                                                                                                                                                                                                     WPI; 2000-106079/09.
                                                                                                                                                                                        SHANKARA S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity
Ното варіепв
                      WO9965928-A2
                                                                   18-JUN-1999;
                                                                                                                 19-JUN-1998;
                                                                                                                                        19-JUN-1998;
                                                                                            19-JUN-1998;
                                                                                                       19-JUN-1998;
                                            23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAC73991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                               (GENZ)
                                                                                                                                                                                        (SHAN/)
                                                                                                                                                                         (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            d
```

```
The present invention describes a group of genes consisting of 100 genes which are highly expressed in human dendritic cells; a group of genes which are expressed at a higher frequency in human dendritic cells than in human monocytes; and a group of genes which are expressed at lower frequency in human dendritic cells than in human monocytes. Bach group of genes are characterised in that cDNAs of these genes respectively have the base sequences of SEQ ID NO:10 to 100 (AAC73914 to AAC74013), SEQ ID NO:101 to 200 (AAC74014 to AAC74113) and SEQ ID NO:201 to 300 (AAC74114 to AAC74213), each is continuous with the base sequence 5'-CATG-3' located most closely to the poly-A region. The sequences can be used for the investigation of the role and mechanism of the involvement of diseases in which dendritic cells play a significant role, e.g. cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Groups of genes expressed in human dendritic cells at a greater or lesser extent than in monocytes for investigation and diagnosis of autoimmune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; monocyte; macrophage; GM-macrophage; M-macrophage; tag; granulocyte-macrophage colony-stimulating factor; characterisation; gm-csf; identification; diagnosis; gene specificity; oncogenesis; disease onset mechanism; genetic disease; drug development; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human macrophage gene Tag oligonucleotide sequence SEQ ID NO:148.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Suzuki T;
                                                                                                                                                                                                                                                                                                                                                      (NISC-) JAPAN SCI & TECHNOLOGY CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 10; 95pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAA56254 standard; DNA; 10 BP.
                                                                                                                                                                                                           30-MAR-2000; 2000WO-JP002019.
                                                                                                                                                                                                                                                                                  99JP-00095481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-JP005982
                                                                                                                                                                                                                                                                                                                                                                                                                                 Matsushima K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-SEP-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and autoimmune diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-619172/59.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        disease and tumors.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GCCGGCGC
                                                               WO200060074-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200024892-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Hashimoto S,
Homo sapiens.
                                                                                                                                                                                                                                                                                  01-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-OCT-1999;
```

98JP-00307532

日本の 一本明 小でんしました

```
RESULT 450
                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                          AAA56346,
  à
                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes 100 human genes, which are expressed most frequently in human monocytes. The cDNA of each gene has a sequence fully defined in the specification, and lacking the CATG sequence located adjacent to polyA region. Also described are: (1) an antibody pecifically for the protein encoded by any of the genes; (2) oligonuclectides obtained from the CDNA sequences; (3) 380 human genes which are expressed most frequently in human macrophages, differentiated from human monocytes by granulocyte-macrophage colony-stimulating factor, the CDNA of each gene has a fully defined sequence, given in the specification, lacking the base sequence CATG located most closely to the poly A region, (4) an antibody specifically for the protein encoded by any of the genes of (3); and (5) oligonucleotides obtained from the CDNA sequences of (3). The genes and cDNAS, are used for the study of gene specificatly and disease onset mechanism e.g. oncogenesis, genetic specifically claimed oligonucleotide tag sequences for human genes
                                                                                                                                                                                                                                                                                                                                                                                                                ó
                                                                                Genes most frequently expressed in human monocytes and GM-macrophages and M-macrophages studied and with cDNAs characterized, for study of gene specificity, disease onset mechanism, drug development and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          granulocyte-macrophage colony-stimulating factor; characterisation; GM-CSF; identification; diagnosis; gene specificity; oncogenesis; disease onset mechanism; genetic disease; drug development; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human monocyte gene Tag oligonucleotide sequence SEQ ID NO:25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               monocyte; macrophage; GM-macrophage; M-macrophage; tag;
                                                                                                                                                                                                                                                                                                                                                                                       Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                       Score 7.4; DB 1;
Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                          expressed in monocytes and macrophages
                                 Matsushima K, Suzuki T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (NISC-) JAPAN SCI & TECHNOLOGY CORP.
            (NISC-) JAPAN SCI & TECHNOLOGY CORP
                                                                                                                              Claim 7; Page 68; 138pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAA56131 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                         46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-JP005982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98JP-00307532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matsushima K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 88.9%
                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 GCCGGCGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-350734/30.
                                                          WPI; 2000-350734/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200024892-A1
                                   Hashimoto S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hashimoto S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA56131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAA56131
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
```

```
The present invention describes 100 human genes, which are expressed most frequently in human monocytes. The cDNA of each gene has a sequence fully defined in the specification, and lacking the CATG sequence located adjacent to polyA region. Also described are: (1) an antibody continuation of the polyA region. Also described are: (1) an antibody specifically for the protein encoded by any of the genes; (2) oligonucleotides obtained from the cDNA sequences; (3) 380 human genes which are expressed most frequently in human macrophages, differentiated from human monocytes by granulocyte-macrophage colony-stimulating factor, the cDNA of each gene has a fully defined sequence, given in the cspecification, lacking the base sequence CATG located most closely to the specification, lacking the base sequence CATG located most closely to the poly A region; (4) an antibody specifically for the protein encoded by any of the genes of (3). The genes and cDNABA, are used for the study of gene specificity and disease onset mechanism e.g. oncogenesis, genetic diseases, drug development and diagnosis. AAAS6107 to AAAS6886 represent specifically claimed oligonucleotide tag sequences for human genes constructions and macrophages
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
Genes most frequently expressed in human monocytes and GM-macrophages and M-macrophages studied and with cDNAs characterized, for study of gene specificity, disease onset mechanism, drug development and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention describes 100 human genes, which are expressed most
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genes most frequently expressed in human monocytes and GM-macrophages and M-macrophages studied and with cDNAs characterized, for study of gene specificity, disease onset mechanism, drug development and diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              granulocyte-macrophage colony-stimulating factor; characterisation; GM-CSF; identification; diagnosis; gene specificity; oncogenesis; disease onset mechanism; genetic disease; drug development; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human macrophage gene Tag oligonucleotide sequence SEQ ID NO:240.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ..
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; monocyte; macrophage; GM-macrophage; M-macrophage; tag;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (NISC-) JAPAN SCI & TECHNOLOGY CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 13; Page 87; 138pp; Japanese.
                                                                                                                                                               Claim 1; Page 44; 138pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-JP005982.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98JP-00307532.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matsushima K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA56346 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              07-SEP-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-350734/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 GCCGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200024892-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hashimoto S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-MAY-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA56346;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
```

```
frequently in human monocytes. The cDNA of each gene has a sequence fully defined in the specification, and lacking the CATG sequence located adjacent to polyA region. Also described are: (1) an antibody specifically for the protein encoded by any of the genes; (2) oligonucleotides obtained from the cDNA sequences; (3) 380 human genes which are expressed most frequently in human macrophages, differentiated from human monocytes by granulocyte-macrophages colony-stimularing factor, the cDNA of each gene has a fully defined sequence, given in the specification, lacking the base sequence CATG located most closely to the poly A region, (4) and natibody specifically for the protein encoded by any of the genes of (3); and (5) oligonucleotides obtained from the cDNA sequences of (3). The genes and cDNAB, are used for the study of gene specificity and disease onset mechanism e.g. oncogenesis, genetic specifically claimed oligonucleotide tag sequences for human genes conservations and macrophages
                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes a pharmaceutical composition, comprising at least one agent (1) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; adenosine Al receptor; antisense oligonucleotide; hypoxia; adenosine As receptor; adenosine As receptor; phosphorosine As receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoporotective; anti-allergic; anti-inflammatory; anti-hypoxic; enpresenticular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel composition for treating or preventing e.g. cardiopulmonary and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:789
                                                                                                                                                                                                                                                                                                                                                                                                            .
0
                                                                                                                                                                                                                                                                                                                                                                 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 17; Page 35; 252pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAA03505 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0088501P.
98US-00093972.
98US-0088657P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US012775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                               Query Match 46.3
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                         3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ||||||
|-||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-JUN-1998;
09-JUN-1998;
09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9963938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA03505;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA03505
     ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                合
```

```
CC (I) is an adenosine A2a receptor agonist (Ia), or an oligonucleotide (Ib), containing less than 154 adenosine (A), that is antisense to target genes or corresponding RNA, to genomic flanking regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 agonist activity or A2a antagonist activity (or at least no agonist activity or A2a antagonist activity (or at least no agonist activity or A2a antagonist activity (or at cleast no agonist activity or A2a antagonism activity or at this receptor). (I) may be a mixture of (Ia) and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine creeptor-mediated cardiac, lung and/or renal damage or failure compositions are used to prevent, alleviate and/or release and/or receptor-mediated activity or a secondary of this or a denosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome confunction of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome confunction agonism to the composition of the present invention. AAA02719, AAA02719, AAA02721 and AAA02721 to AAA02719. AAA02719, AAA02719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              adenosine A2a receptor; adenosine Ab receptor; adenosine A3 receptor; phosphorothioate; cardiopulmonary failure; renal failure; ischaemia; endotoxin release; ARDS; acute respiratory distress syndrome; cytoprotective; anti-allergi; anti-inflammatory; anti-hypoxic; supraventricular tachycardia; allergic rhinitis; acute inflammation; chronic obstructive pulmonary disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel composition for treating or preventing e.g. cardiopulmonary and renal injury.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human adenosine Al receptor antisense oligonucleotide SEQ ID NO:678.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; adenosine Al receptor; antisense oligonucleotide; hypoxia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US012775.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0088501P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-00093972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA03394 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7 GCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GCGGCATGG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-116433/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hill JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9963938-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 09-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA03394;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nyce JW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAA03394
          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
```

```
05-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                               (ROBE/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ89806/
ద
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ઠે
                                             The present invention describes a pharmaceutical composition, comprising at least one agent (I) that prevents, alleviates and/or inhibits adenosine-mediated cardiopulmonary and/or renal damage and/or failure.

(I) is an adenosine A2a receptor agonist (Ia), or an oligomuclectide composition and acceptor agonist (Ia), or an oligomuclectide composition and coding and non-coding regions (i.e. 5' or 3' ends or segments between coding and non-coding sequences), or to all segments of mRNA encoding the adenosine A1, A2a, A2b or A3 receptors, and has A1, A2b or A3 agonist activity or A2a antagonist activity (or at least no agonist activity at this receptor). (I) may be a mixture of (Ia) and (Ib), and optionally also contains one or more surfactants. The compositions are used to prevent, alleviate and/or treat adenosine compositions are used to prevent, alleviate and/or treat adenosine (particularly where associated with ischaemia, toxin release and/or administration of drugs or imaging agents, e.g. adenosine for treating supraventricular tachycardia); (adult) respiratory distress syndrome (e.g. associated with sepsis); (adult) respiratory distress syndrome (e.g. associated with sepsis); (adult) respiratory distress syndrome con surraventricular pachycardia); (adult) respiratory distress syndrome con stress-test agents, particularly where such conditions are associated with acute inflammation. AAA02119, AAA02721 and AAA02721 and AAA02721 and AAA03715 represent specifically claimed phosphorothicate antisense ollowed the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA02718, AAA02720, AAA02722 and AAA03716 to AAA03720 represent other phosphorothioate oligonucleotides used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SAGE tag; serial analysis of gene expression; diagnosis; differential gene expression; characterisation; targetted expression; tumour; cancer; immunotherapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human colon tumour upregulated gene SAGE tag, SEQ ID NO:28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 1 A; 1 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                Claim 17; Page 34; 252pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAZ79737 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0089844P.
98US-0089853P.
98US-0089878P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0089991P.
98US-0089992P.
98US-0089933P.
98US-0089994P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0089997P.
98US-0089999P.
98US-00900000P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US013820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 88.9
Les 8, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 GGAGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9966303-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-JUN-1998;
19-JUN-1998;
19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .9-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ79737;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
```

8

```
Sequences AA279710-Z79916 represent SAGE (serial analysis of gene expression) tags used to identify mRNA transcripts which are expression) tags used to identify mRNA transcripts which are differentially expressed in a variety of normal or malignant cell types. Some of the transcripts correspond to known genes or BSTS (expressed configuration or the preferentially or differentially expressed in that particular cell type, while other transcripts correspond to novel genes. The invention also provides a nucleotide comprising a promocer sequence derived from one of the configuration nucleotide sequence, and gene delivery vehicles and host coll ferentially expressed genes, which may optionally be operably linked to a foreign nucleotide sequence, and gene delivery vehicles and host comprising the polymucleotides of the invention. A nucleotide comprising sequences AAZ79710-Z79916 may be used in diagnostic procedures to characterise a cell of a specific tissue type and to determine whether contains a new ordinate expression of differentially expressed genes compound. The malignant. They may be used to screen for agents that condulate expression of the foreign gene in a particular cell type. For example, a promoter derived from a gene preferentially expressed in communer construct of the invential or a particular cell type. Contagnetic cells (antigen-presenting cells, or APCs), may be operably clinked to a sequence encoding an immunostimulatory molecule and a construct could be transduced into a sequence encoding an immunostimulatory molecule and a mand would be useful for inducing an immunostimulatory molecule and a mandal manda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     immune effector cells in vivo, or in cancer immunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 2 A; 3 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New polynucleotide useful in cancer immunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 52; 97pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAZ89806 standard; cDNA; 10 BP.
98US-0090036P.
98US-0090041P.
98US-0090041P.
98US-0090041P.
98US-0090043P.
                                                                                                                                                                                                                                   980S-0090045P.
98US-0090047P.
98US-0090072P.
98US-0090076P.
98US-0090077P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0090079P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0090080P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0111715P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 88.50,
Best Local Similarity 88.50,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Roberts BL, Shankara S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENZYME CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 GGCAGCATC 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-106132/09.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (SHAN/) SHANKARA S.
                                                                                                        19-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-100-1998
                                    19-JUN-1998
                                                                    19-JUN-1998
                                                                                                                                     19-JUN-1998
                                                                                                                                                                             19-JUN-1998
                                                                                                                                                                                                              19-JUN-1998
                                                                                                                                                                                                                                              19-JUN-1998
                                                                                                                                                                                                                                                                                  19-JUN-1998
                                                                                                                                                                                                                                                                                                               19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                    19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-DEC-1998
       19-JUN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAZ89806;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GENZ)
```

ö

```
26-OCT-2000
                  cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF19157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                        Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF19157
   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                 Differentially expressed; cardiovascular disease; atherosclerosis; ischaemia; reperfusion; hypertension; restenosis; arterial inflammation; rchd005; transmembrane protein; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection;
                                                                                                                                                                                                                                                                                                                                                                                                       This sequence represents a differential display primer, used in the cloning of rchd005. Rchd005 is related to the rchd523 transmembrane polypeptide (see AAY7896) encoded by cDNA contained in the plasmid pfchd523. The rchd523 protein is differentially expressed in diseased cells compared to healthy cells. The rchd523 protein may be used as a marker protein for the diagnosis of cardiovascular diseases including atherosclerosis, ischaemia, reperfusion, hypertension, restenosis and arterial inflammation. rchd523 peptides may be used as antigens in the production of antibodies specific for rchd523. The anti-rchd523 antibodies may then be used in diagnostic assays to quantitate rchd523
                                                                                                                                                                                                                                                                                                                              Marker proteins for the diagnosis of cardiovascular diseases such as atherosclerosis and hypertension, comprising peptide sequences derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
           Differential display primer OPE7 used in rchd005 cloning.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human adenosine Al receptor polynucleotide fragment #835.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 3 A; 3 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                        from the rchd523 transmembrane protein
                                                                                                                                                                                                                                        (BGHM ) BRIGHAM & WOMENS HOSPITAL. (MILL-) MILLENNIUM PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Col 9; 121pp; English.
                                                                                                                                                                                                    95US-00485573.
96US-00599654.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAF19268 standard; DNA; 10 BP.
                                                                                                                                                               97US-00944423.
                                                                                                                                                                                        95US-00386844.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ouery Match
Best Local Similarity 88.39,
Best Local Similarity 88.39,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                              Falb DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                       WPI; 2000-146911/13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptides in samples
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10 GGCTGCATC
                                                                                                                                                                                                                                                                                Gimbrone MA,
                                                                                                                                                               06-OCT-1997;
                                                                                                                                                                                       10-FEB-1995;
                                                                                                                                                                                                      17-JUN-1995;
                                                                                                                                                                                                                09-FEB-1996;
                                                                                                             US6020463-A.
                                                                                                                                     01-FEB-2000
                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF19268;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 455
ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
```

```
The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense cligonucleotides the A is replaced by a 'Universal' or alternative base. (C) isomulation and or alternative base. (I) can have respiratory, bronchodiator, antiinflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with captivity of target polypeptides associated with Lung/respiratory disorders and malignancies, such as stimulating and cartiving peptide factors and transmitters, cranscription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokine receptors, cytokines and chemokine receptors, adenosine receptors, cytokine and chemokine receptors, adenosine receptors, bradykinin receptors, contral creceptors, and peripheral nervous and non-nervous system (CNS) and peripheral nervous and non-nervous system (CT receptors, binding proteins and malignancy associated proteins. The receptors binding proteins and malignancy associated proteins. The creeptors binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders cincluding respiratory obstruction (especially pulmonary obstruction and/or bronchoconstriction) and/or lung inflammation, allergy(les) and/or condition and associated with a disease or condition and and peripheral response or including respiratory obstruction which are associated with a disease or condition and and peripheral response or including respiratory obstruction with a way to including respiratory obstruction without an adsociated with a disease or condition and and or bronchoconstriction without and and seconds with a disease or condition without and and seconds with a disease or condition without and and seconds with a disease or condition without and and seconds and seconds and seconds and 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, bronchitis, and/or cancer. AAF18434 to AAF21543 represent human polynucleotide fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Low adenosine (A) content antisense oligonucleotides which do not trigge adenosine receptors during metabolism, useful e.g. for treating cancers and respiratory obstructions.
chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%; Score 7.4; DB 1; Length 10; larity 88.9%; Pred. No. 2.8e+02; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 14; Page 119; 1592pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-MAR-2000; 2000WO-US008020.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0127958P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF19157 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-679539/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGGCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGGCATGG
                                                                                                                                                                                                                                                                  WO200062736-A2
                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     06-APR-1999;
```

14-MAR-2001

```
Sequence 10 BP; 1 A; 1 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                           Claim 14; Page 117; 1592pp; English.
                                                                                 24-MAR-2000; 2000WO-US008020
                                                                                                                                   and respiratory obstructions
                                                                                         99US-0127958P
                                                                                                 EAST CAROLINA.
(first entry)
                                                                                                                                                                                                                                                              the present invention
                                                                                                                    WPI; 2000-679539/66
                                                                  WO200062736-A2.
                                                          Homo sapiens.
                                                                                         06-APR-1999;
                                                                                                (UYEC-) UNIV
(NYCE/) NYCE
                                                                         26-OCT-2000
                                                   cancer; ss
                                                                                                                                                                                                                                                                              Query Match
                                                                                                            Nyce JW;
```

```
DA, Gimbrone MA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6 GGCGCCATC 14
                        GGAGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-136704/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-OCT-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10-FEB-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US6018025-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-FEB-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-JAN-2000.
                                                                                                                                                                                                             AAZ88018;
                        N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Falb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                    AAZ88018,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAD04430
                                                                                                                                                                                  ద
                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes low adenosine (A) content antisense oligonucleotides and compositions (I) comprising them. In the antisense oligonucleotides the A is replaced by a 'Universal' or alternative base. (I) can have respiratory, bronchodilator, antiliflammatory, analgesic, immunosuppressive, antiasthmatic, hypotensive and cytostatic activities. The antisense oligonucleotides and (I) can be used to down-regulate the expression and or activity of target polypeptides associated with lung/respiratory disorders and malignancies, such as stimulating and cativity of target polypeptides associated with lung/respiratory disorders and transmitters, transcription factors, immunoglobulins and antibodies, antibody receptors, cytokines and chemokines, endogenously produced specific and non-specific enzymes, binding proteins, adhesion molecules and their receptors, cytokine and nervous system (CNS) and peripheral nervous and non-nervous system peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      transmitters, defensins, growth factors, vasoactive peptides and receptors, binding proteins and malignancy associated proteins. The antisense oligonucleotides may be used in this way to treat disorders including respiratory obstruction (especially pulmonary obstruction and/or lung inflammation, allergy (ies) and/or surfactant hypoproduction which are associated with a disease or condition selected from pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome (RDS), pain, cystic fibrosis (CF), allergic rhinitis (AR), pulmonary hypertension, emphysema, chronic obstructive pulmonary disease (COPD), pulmonary transplantation rejection, pulmonary infections, branchis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Low adenosine (A) content antisense oligonucleotides which do not trigger adenosine receptors during metabolism, useful e.g. for treating cancers
                                              Low adenosine antisense oligonucleotide; phosphorothioate; allergy; human; airway disorder; bronchoconstriction; lung inflammation; surfactant depletion; respiratory; bronchodilator; antiinflammatory; immunosuppressive; antiasthmatic; analgesic; hypotensive; cytostatic; respiratory obstruction; pulmonary obstruction; impeded respiration; surfactant hypoproduction; pulmonary vasoconstriction; asthma; RDS; respiratory distress syndrome; pain; cystic fibrosis; allergic rhinitis; pulmonary hypertension; emphysema; pulmonary transplantation rejection; chronic obstructive pulmonary disease; pulmonary infection; bronchitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and/or cancer. AAF18434 to AAF21543 represent human polynucleotide
fragments and antisense oligonucleotides used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
Human adenosine Al receptor polynucleotide fragment #724.
```

ô

Gaps ; 0

Local Similarity 88.5

Matches

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       either the amino acid sequence of 1481 residues, given in AAK68447, or ar amino acid sequence encoded by the CDNA contained in plasmids pFCHD528A (ArCC 69985), pFCHD528B (ArCC 69986) and pFCHD528C (ArCC 69987). The polypeptide is useful in the treatment and diagnosis of cardiovascular disease, such as, atherosclerosis, isohaemia/reperfusion, hypertension, restenosis and arterial inflammation. AAZ88001 to AAZ88040, and AAY68444 to AAY68457 represent sequences used in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Isolated polypeptide for treating and diagnosing cardiovascular disease, such as, atherosclerosis, ischemia/reperfusion, hypertension, restenosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention describes an isolated polypeptide (I) comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                        Human umbilical vein endothelial cell forward primer SEQ ID NO:18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                             Cardiovascular disease; diagnosis; atherosclerosis; ischaemia; reperfusion; hypertension; restenosis; arterial inflammation; antiarteriosclerotic; vasotropic; hypotensive; PCR primer; 88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10 BP; 3 A; 3 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MILL-) MILLENIUM PHARM INC.
(BGHM ) BRIGHAM & WOMENS HOSPITAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example; Col 9; 122pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВР.
                                                                                                                                                                                                           AAZ88018 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-00944868.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95US-00386844.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96US-00599654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAD04430 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                              19-APR-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and arterial inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-JUL-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8; Conservative
GCCGGCCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAD04430;
N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XXXX
à
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The patent discloses a polynuclectide comprising one or more of 3 novel single nuclectide polymorphisms in the human 5-hydroxytryptamine (Serotonin) receptor 1B (HTR1B) gene. The polymorphic variant comprises at least one polymorphism selected from quanine at PS1, thymine at PS2, and adenine at PS4, or adenine at position corresponding to nuclectide 540. The HTR1B gene is useful for therapeutic purposes. It is useful in studying the expression and biological function HTR1B, as well as in developing drugs targetting this protein. It is also useful in diagnostics and forensic applications. Identification of an association for developing tests and therapeutic treatments for migraine and other neurological disorders. It is also used in gene therapy. The present DNA sequence is a primer which is used to detect the polymorphisms in HTR1B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; cholinergic receptor, nicotinic, beta polypeptide 3; CHRNB3; single nucleotide polymorphism; SNP; drug screening; Alzheimer's disease; neurological disorder; gene therapy; genotyping; haplotyping; primer; ss.
                                                    gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                   Polynucleotide useful for therapeutic purposes, comprises nucleotide polymorphisms in 5-hydroxytryptamine (serotonin) receptor 1B gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                     disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                 therapeutic; forensic application; migraine; neurological
                                                  Human; 5-hydroxytryptamine receptor 1B; HTR1B; serotonin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
               Primer #6 for detecting human HTRIB gene polymorphisms.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human CHRNB3 gene polymorphism detecting primer #12.
                                                                                                                                                                                                                                                                                                                      Stephens JC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 2 A; 3 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                     Nandabalan K,
                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 16; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene by primer-extension technique
                                                                                                                                                                                                                                                                                    (GENA-) GENAISSANCE PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAD20864 standard; DNA; 10 BP.
                                                                                                                                                                                                                05-OCT-2000; 2000WO-US027486.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-JAN-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8; Conservative
                                                                                                                                                                                                                                                                                                                 Denton RR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7 GCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GCGCCAGCG 9
                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-290602/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                 WO200125194-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200175063-A2
                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                 07-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                  12-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-OCT-2001
                                                                                   primer; 88.
                                                                                                                                                                                                                                                                                                                     Choi JY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAD20864;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 459
BXBXBXBXBXBXBXB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

```
New polynucleotide, useful for studying expression and function of CHRNB3, comprises polymorphic variant of cholinergic receptor, nicotinic, beta polypeptide 3 (CHRNB3) gene, containing one of polymorphic sites PS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vaccine, cytostatic; virucidal; bactericidal; fungicidal; anti-parasitic; immunostimulatory; tumour; viral infection; bacterial infection; fungal infection; parasitic infection; cancer; asthma; infectious disease; allergy; immune deficiency; phosphorothioate; ss.
                                                                                                                                                                                                                                                                                                                                                           The invention relates to methods for haplotyping cholinergic receptor, nicotinic, beta polypeptide 3 (CHRNB3) gene. The invention also provides single mucleotide polymorphisms (SNP) in the human CHRNB13 gene. Polymorphic variants of CHRNB13 gene is used for screening for candidate drugs to treat diseases related to CHRNB3 activity. They are also useful in studying the effect of variation on the biological activity of CHRNB3 swell as on the binding affinity of candidate drugs targeting CHRNB3 for treating Alzheimer's disease and other neurological activity of CHRNB3 are also useful in gene therapy. Compositions comprising CHRNB3 gene polymorphic variants are useful for genetyping and/or happlotyping a CHRNB3 gene in an individual. The present sequence is a primer used to detect human CHRNB3 gene polymorphisms. Human CHRNB3 gene includes 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 1 A; 4 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                  Stephena JC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Immunostimulatory nucleic acid #1049.
                                                                                                                                                                                                                                                                                                                                  Claim 17; Page 15; 68pp; English.
                                                                                GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP.
                                               03-APR-2000; 2000US-0194162P.
                 30-MAR-2001; 2001WO-US010277.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-SEP-1999; 99US-0156113P.
27-SEP-1999; 99US-0156135P.
23-AUG-2000; 2000US-0227436P.
                                                                                                                                                                                Koshy B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-SEP-2000; 2000WO-US026383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF99933 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polymorphic sites PSI-PS8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8; Conservative
                                                                                                                                              (STEP/) STEPHENS J C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 GGCGCCATC 9
                                                                                                                                                                                                                 WPI; 2001-626425/72.
                                                                                               CHEW A. CHOI J Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                Chew A, Choi JY,
                                                                                                                                KOSHY B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200122972-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF99933;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                (GENA-)
                                                                                                                                (KOSH/)
                                                                                                                  (HOI)
                                                                                               CHEW/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAF99933/
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
```

```
Homo sapiens
                                                                                                                                                                                                                                                                                                         20-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                    31-MAY-2001.
                                                                                                                                                                                                                                                                                    AAH63399;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loca
Matches
                                                                                                                                                           Matches
                                                                                                                                                                                                                                                    AAH63399,
                                                                                                                                                                                                                                         RESULT
  ¥8888888888
                                                                                                                                                                                                                                                              ઠે
                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠ
                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                       response. The method comprises administering an immunostimulatory nucleic acid to a non-rodent subject in sufficient quantity to stimulate an immune response. The present sequence is one such immunostimulatory nucleic acids can be pyrimidine or thymidine (T) rich. The method is used to vaccinate subjects against tumour antigens, viral antigens (e.g. herpesviridae, retroviridae, and/or orthomyxoviridae), bacterial antigens (e.g. toxoplasma, themory antigens and/or parasitic antigens. The method is staphylococcus), fungal antigens and/or parasitic antigens. The method is also useful for preventing cancer, asthma, infectious disease, allergy or immune deficiency. The present sequence can also be used to redirect a Th2 to a Th1 immune response and to activate immune cells. Note: the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transcriptome; gene expression pattern; cancer; drug screening; diagnosis; cell specific gene expression; ss.
                                                                                       Vaccinating against tumors, infectious diseases, allergies and asthma using immunostimulatory Py-rich and TG nucleic acids.
                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                               The present invention relates to a method for stimulating an immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human ubiquitously expressed transcriptome sequence SEQ ID NO: 407
                                                                                                                                                                                                                                                                                                                                                                   .;
0
                                                                                                                                                                                                                                                                                                                                          Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                               present sequence may have a phosphorothioate backbone
                                                                                                                                                                                                                                                                                                                     Sequence 10 BP; 2 A; 2 C; 3 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kinzler KW;
                                                                                                                         Disclosure; Page 10; 338pp; English
                                            Schetter C, Vollmer J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 13; Page 48; 94pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAH63567 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vogelstein B,
                                                                                                                                                                                                                                                                                                                                          46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-NOV-2000; 2000WO-US031922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-00448480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYJO ) UNIV JOHNS HOPKINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                 8; Conservative
          (IOWA ) UNIV IOWA RES FOI
(COLE-) COLEY PHARM GMBH
                                                                                                                                                                                                                                                                                                                                                                                       8 CGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-367706/38.
                                                                   WPI; 2001-273485/28
                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200138577-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Velculescu VE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAY-2001
                                            Krieg AM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAH63567;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAH63567,
                                                                                                                                                                                                                                                                                                                                                                                                           원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                      ö
The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; transcriptome; gene expression pattern; cancer; drug screening; cancer diagnosis; cell specific gene expression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New isolated polynucleotides, useful for identifying specific cell tynsuch as cancer cell, comprises transcriptomes expressed in particular cell types.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human cancer tissue associated transcriptome sequence SEQ ID NO: 239
                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                        Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                            Seguence 10 BP; 2 A; 3 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 0 A; 5 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                 Score 7.4; DB 1;
Pred. No. 2.8e+02;
0; Mismatches 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kinzler KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 11; Page 73; 94pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                    46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-NOV-2000; 2000WO-US031922.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99US-00448480.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAH63399 standard; cDNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SNINGO NIND ( OCYU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 88.9
nes 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 88.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ٦
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-367706/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6 GGCGGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9 GGCAGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 CGGCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Velculescu VE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200138577-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-NOV-1999;
```

```
5 GGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                         10 GGCCGGGAT 2
                                                                                                                                                  WPI; 2001-367706/38.
      WO200138577-A2.
                                                                                                                         Velculescu VE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200138577-A2.
                                                                             24-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-NOV-1999;
                              31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-SEP-2001
                                                                                                                                                                                                    cell types.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH64478;
                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAH64478,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
      용
                                                                                                                                                                                                                                                                                                                                                                                                                                     ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce cancer specific game expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                          New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular
                                                                                                                                                           Human; transcriptome; gene expression pattern; cancer; drug screening;
cancer diagnosis; cell specific gene expression; ss.
                                                                                                                                  Human colon epithelium specific transcriptome sequence SEQ ID NO: 129,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       transcriptome; gene expression pattern; cancer; drug screening diagnosis; cell specific gene expression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human colon epithelium specific transcriptome sequence SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; Live 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10 BP; 2 A; 4 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                              Kinzler KW
                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 11; Page 41; 94pp; English.
                                                          AAH63289 standard; cDNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAH63187 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                           Velculescu VE, Vogelstein B,
                                                                                                                                                                                                                                                                    21-NOV-2000; 2000WO-US031922.
                                                                                                                                                                                                                                                                                              99US-00448480.
                                                                                                                                                                                                                                                                                                                    SNING OLYU (OLYU)
                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 GCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-367706/38.
 9 CGACGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
Les 8; Conserv
                                                                                                                                                                                                                    WO200138577-A2
                                                                                                                                                                                                                                                                                            24-NOV-1999;
                                                                                                                                                                                               Homo sapiens
                                                                                                          20-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                            31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                   cell types.
                                                                                   AAH63289;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH63187;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                          Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAH63187
                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   X S X E X E X E X S X X X X
```

```
The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                        New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular cell types.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; transcriptome; gene expression pattern; cancer; drug screening; cancer diagnosis; cell specific gene expression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human ubiquitously expressed transcriptome sequence SEQ ID NO: 1318.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 2 A; 6 C; 1 G; 1 T; 0 U; 0 Other;
                                                                                                                              Kinzler KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kinzler KW;
                                                                                                                                                                                                                                                                                              Claim 1; Page 39; 94pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP.
                                                                                                                            Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Velculescu VE, Vogelstein B,
21-NOV-2000; 2000WO-US031922.
                                           99US-00448480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match 46.3%;
Local Similarity 88.9%;
Hes 8; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-NOV-2000; 2000WO-US031922.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-00448480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAH64478 standard; cDNA; 10
                                                                                SNIMAOH SNHOL VINU ( OLYU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SNINGO NIND ( OCYU)
```

 $8 \times 0 0 0 0 0 0 0 0 0 \times 8$

```
The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAM63161-AAM64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitouely expressed in humans. They can also be used to screen for drugs, reduce cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular
                                                                                                                                                                                                                                                                                                                         Human; transcriptome; gene expression pattern; cancer; drug screening; cancer diagnosis; cell specific gene expression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; transcriptome; gene expression pattern; cancer; drug screening;
cancer diagnosis; cell specific gene expression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human ubiquitously expressed transcriptome sequence SEQ ID NO: 1346.
                                                                                                                                                                                                                                                                            Human colon epithelium specific transcriptome sequence SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 2 A; 4 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kinzler KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 11; Page 40; 94pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                                                                                                                                        BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Velculescu VE, Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-NOV-2000; 2000WO-US031922.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-00448480
                                                                                                                                      AAH63217 standard; cDNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAH64506 standard; cDNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SNING OUND JOHNS HOPKINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-SEP-2001 (first entry)
                                                                                                                                                                                                                                  20-SEP-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 88.2
Best Local 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4 CGGGCGGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-367706/38.
10 GCCGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200138577-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-MAY-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cell types.
                                                                                                                                                                                     AAH63217;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH64506;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAH64506
                         셤
                                                                                                                                                                ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SXXXXXXXXXXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                              ;
0
                                     The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cencer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transcriptome; gene expression pattern; cancer; drug screening; diagnosis; cell specific gene expression; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human colon cancer associated transcriptome sequence SEQ ID NO: 1464.
                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                              .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 46.3%; Score 7.4; DB 1; Length 10; Best Local Similarity 88.9%; Pred. No. 2.8e+02; Matches 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                               46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                     Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kinzler KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 74; 94pp; English.
Claim 13; Page 69; 94pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAH64624 standard; cDNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-NOV-2000; 2000WO-US031922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-00448480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SNINGO NINU (OCYU)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                            8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                         3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                 10 GCCGGCGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-367706/38.
                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200138577-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Velculescu VE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            such as car
cell types.
```

Human; cancer

RESULT 466 AAH64624/c

ઠે 셤 ö

Gaps

;

Homo sapiens

3 GCGGCGGC 11

ठे

```
JP2001069993-A.
                                                                                                                                                                                                                                                                                                                                                                                                                        08-JUL-1999;
                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                    21-MAR-2001.
                                                                                                                                                                                                                                                            AAH32940;
                                                                                                                                    Query Match
                                                                                                                                                                                                                       RESULT 470
AAH32940/c
                                                                                                                                                     Matches
  ઠ
                                                                                                                                                                                          셤
                                                                                                                                                                                                                                           ö
                                                                                                                                                                                              The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64721 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                        New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular cell types.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New isolated polynucleotides, useful for identifying specific cell type, such as cancer cell, comprises transcriptomes expressed in particular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; transcriptome; gene expression pattern; cancer; drug screening; cancer diagnosis; cell specific gene expression; ss.
                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                            ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human highly expressed transcriptome sequence SEQ ID NO: 1528.
                                                                                                                                                                                                                                                                                                       46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                      Sequence 10 BP; 1 A; 4 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                      Kinzler KW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kinzler KW;
                                                                                                                                                                             Claim 13; Page 70; 94pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                              BP.
                                                                                                    Velculescu VE, Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vogelstein B,
                                             21-NOV-2000; 2000WO-US031922.
                                                                99US-00448480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-NOV-2000; 2000WO-US031922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-00448480
                                                                                                                                                                                                                                                                                                                                                                                                             AAH64690 standard; cDNA; 10
                                                                                 (UYJO ) UNIV JOHNS HOPKINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SNINGO UNIV JOHNS HOPKINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 88.2.
Best Local 8; Conservative
                                                                                                                                                                                                                                                                                                                                                               CGACGGCG 10
                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                      WPI; 2001-367706/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-367706/38.
                                                                                                                                                                                                                                                                                                                                            1 CGGCGGGCG
        WO200138577-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Velculescu VE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200138577-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-NOV-1999;
                                                               24-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-SEP-2001
                          31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               such as can
cell types.
                                                                                                                                                                                                                                                                                                                                                                                                                                AAH64690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human;
                                                                                                                                                                                                                                                                                                                                                                                         RESULT 469
                                                                                                                                                                                                                                                                                                                                                                                                    AAH64690,
ð
                                                                                                                                                                                                                                                                                                                                                              g
```

**

```
ö
                                                                       The present invention describes a method of identifying the type of cell in a sample, involving determining which of the sequences AAH63161-AAH64724 is expressed by the cell. The transcriptomes described in the invention are cell-type specific, cancer specific or ubiquitously expressed in humans. They can also be used to screen for drugs, reduce cancer specific gene expression, standardise expression and restore the function of a diseased cell or tissue. The present sequence is one of the transcriptomes described in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes an lipopolysaccharide (LPS) activated human monocyte expression gene group consisting of the high-ranking 50 genes of the highest expression among the genes expressed by human monocyte stimulated by LPS in which the CDNA of each gene has the base sequence of (AAH32628 to AAH32677) continuous to the base sequence 5'-CANG-3' nearest to the polyA region. The gene group is useful for the development of new means for the diagnosis and the treatment of various human diseases in which human monocyte plays an important role. AAH3264s expression gene cDNA tegens from the present invention. AAH3294 represents an LPS activated human monocyte expression gene cDNA sequence encoding AAB98009, which are given in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; LPS; lipopolysaccharide; monocyte expression gene; tag; EST; expressed sequence tag; diagnosis; human disease; treatment; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LPS activated human monocyte expression gene cDNA tag SEQ:313.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 h 46.3%; Score 7.4; DB 1; Length 10; Similarity 88.9%; Pred. No. 2.8e+02; 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
46.3%; Score 7.4; DB 1; Length 10;
Best Local Similarity 88.9%; Pred. No. 2.8e+02;
Matches 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LPS activated human monocyte expression gene group.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN
Disclosure; Page 76; 94pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 19; Page 49; 52pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ВР.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-APR-2000; 2000JP-00131079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99JP-00195103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAH32940 standard; cDNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13-AUG-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10 GCCGGCGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-304369/32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
```

```
Saccharomyces cerevisiae
                                     16-JUN-1999;
  21-DEC-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF34859;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAF34859/
  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                         The invention relates to a human normal hepatocyte expression gene group comprising 200 genes in the human normal hepatocyte. The cDNA of each gene comprises one of 200 fully defined nucleotide sequences as given in the specification. The gene group and the cDNAs corresponding to each of the genes in the group are useful in the diagnosis and treatment of human hepatopathy. The present sequence is a cDNA corresponding to a gene expressed by normal human hepatocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yeast, Saccharomyces cerevisiae, characterisation; cell cycle, NORF, nor previously assigned open reading frame; nonannotated ORF, SAGE, serial analysis of gene expression; antifungal; tag; identification;
                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                    Human normal hepatocyte expression gene cDNA, SEQ ID NO: 65.
                                                                                                                                                                                                                                                                                                                                                                                                                   Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                      46.3%; Score 7.4; DB 1; Length 1v
88.9%; Pred. No. 2.8e+02;
1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:6308.
                                                                                                                                       Human; hepatocyte; gene expression; hepatopathy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                     Human normal hepatocyte expression gene group.
                                                                                                                                                                                                                                                  (KAGA-) KAGAKU GLJUTSU SHINKO JIGYODAN
                                                                                                                                                                                                                                                                                                       Claim 1; Page 7; 26pp; Japanese.
                                                               ABA06088 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF39569 standard; DNA; 10 BP.
                                                                                                                                                                                                              31-JAN-2000; 2000JP-00023170
                                                                                                                                                                                                                                31-JAN-2000; 2000JP-00023170
                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity 88.9%;
nes 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Saccharomyces cerevisiae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linker; PCR primer; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 66666666 11
3 GCGGGGGG 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                 10 GCCGGCGGC 2
                                                                                                                                                                                                                                                                   WPI; 2001-629566/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 GCCGGCGC
                                                                                                                                                                          JP2001211883-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200077214-A2
                                                                                                                                                         Homo sapiens.
                                                                                                   10-JAN-2002
                                                                                                                                                                                            07-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-MAR-2001
                                                                                 ABA06088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF39569
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 472
                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF39569/
                                                       ABA06088,
                                                                ઠે
                 원
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      셤
```

```
The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previously assigned open reading frame; or nonaminotated ORF) genes comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (M1) of using NORF genes to affect the cell cycle comprising administering a NORF gene whose expression varies by at least 10% between any two phases of the cell cycle selected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate of antifungal drugs comprising: (a) contacting a test substance which a yeast cell; and (b) monitoring expression of a NORF gene whose expression of varies as in M1, where a test substance which modifies the expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human genes which are involved in cell cycle progression of comprising contacting human DNA with a probe which comprises at least 10 contiguous nucleotidaes of a NORF gene whose expression varies as in M1; and (4) a method (M4) for identifying a candidate drug as a member of a class of drugs having a characteristic effect on gene expression in a contioning expression in the yeast cell of at least 1 NORF gene whose expression is affected by the class of the cell cycle, the differentially ceptressed genes may be used as markers of phases of the cell cycle. The methods may be used to identify candidate drugs which affect the cell cycle and for identifying all carlots which affect the cell cycle and for identify candidate drugs which affect the cell cycle and for identify candidate drugs which affect the cell cycle and for identification of antifungal drugs. ARP33268 to ARP43367 represent linkers and by Referential or the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yeast, Saccharomyces cerevisiae, characterisation, cell cycle, NORF, nor previously assigned open reading frame, nonannotated ORF, SAGE, serial analysis of gene expression, antifungal, tag, identification,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:1598.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 2 A; 5 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                   Kinzler K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example; Page 225; 419pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF34859 standard; DNA; 10 BP.
14-JUN-2000; 2000WO-US016223
                                                                                             99US-00335032
                                                                                                                                                                                                                                                                              Velculescu V, Vogelstein B,
                                                                                                                                                                                           (UYJO ) UNIV JOHNS HOPKINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linker; PCR primer; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-061874/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 decedecere
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
```

```
The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previously assigned open reading frame; or nonannotated ORF) genes coding sequence of a yeast gene selected from 199 assigned open reading frame; or nonannotated ORF) genes comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (M1) of using NORF genes to affect the cell cycle scalected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate of the cell cycle selected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate antifungal drugs comprising: (a) contacting a test substance with a yeast cell; and (b) monitoring expression of a NORF gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for contribution buman penes which are involved in cell cycle progression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human genes which a probe which comprises at least 10 contiguous nucleotides of a NORP gene whose expression varies as in M1; and (4) a method (M4) for identifying a candidate drug as a member of a class of drugs having a characteristic effect on gene expression in a cypast cell with a candidate drug and contacting a characteristic effect on gene expression in a cypast cell own pass of drugs in the yeast cell of at least 1 NORF gene whose expression is affected by the class of drugs. The NORF gene whose expression is affected by the class of drugs. The NORF gene whose cot of services and for identification of antidate drugs which affect the cell cycle and for identification of antidate drugs which affect the cell cycle and for identification of antidate drugs which affect the cell cycle method, in the exemplification of the present invention.

Cycle and for identification of the present invention of the present invention.
                                                                                                                                                                                                                                                                                                                                                    Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yeast; Saccharomyces cerevisiae; characterisation; cell cycle; NORF; nor previously assigned open reading frame; nonannotated ORF; SAGE; serial analysis of gene expression; antifungal; tag; identification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 46.3%; Score 7.4; DB 1; Length 10; Similarity 88.9%; Pred. No. 2.8e+02; 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:4781.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10 BP; 2 A; 4 C; 2 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                              Kinzler K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example; Page 57; 419pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF38042 standard; DNA; 10 BP.
                                                                                                                14-JUN-2000; 2000WO-US016223
                                                                                                                                                                                                                                                            Jelculescu V, Vogelstein B,
                                                                                                                                                               99US-00335032
                                                                                                                                                                                                             (UYJO) UNIV JOHNS HOPKINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5 GGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9 GGCCAGCAT 1
                                                                                                                                                                                                                                                                                                        WPI; 2001-061874/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                        WO200077214-A2.
                                                                                                                                                               16-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-MAR-2001
                                                                       21-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF38042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF38042/
셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 $$$$$$$$$$$$
```

```
The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previously assigned open reading frame; or nonamnotated ORF) genes comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (M1) of using NORF genes to affect the cell cycle expression varies by at least 10% between any two phases of the cell cycle selected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate antifungal drugs comprising: (a) contacting a test substance with a yeast cell; and (b) monitoring expression of a NORF gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for cell; and (b) monitoring expression of a NORF gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for comprising contacting human DNA with a probe which comprises at least 10 contiguous nucleotides of a NORP gene whose expression in a contiguous nucleotides of a NORP gene whose expression in a contiguous nucleotides of a NORP gene whose expression in a cyeast cell comprising contacting a yeast cell with a candidate drug as a member of a cyeast cell comprising contacting a yeast cell with a candidate of a cyeast cell comprising contacting a yeast cell with a candidate of a cyeast cell comprising contacting a yeast cell with a candidate drug and cyeast cell comprising contacting a yeast cell with a candidate drug and cyeast cell comprision in the yeast cell of at least 1 NORP gene whose expression is affected by the class of drugs. The NORP gene whose cycle and for identify candidate drugs which a ffect the cell cycle and for identify candidate drugs which a ffect the cell cycle and for identify candidate drugs which a ffect the cell cycle and for identify candidate drugs and primers used in the exemplification of the present invention.

Cycle and contacting the exemplification of the present invention.

Cycle and contacting the exemplification of the present inven
                                                                                                                                                                                                                                                                                                                                                                                                                    Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:6906.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 1 A; 3 C; 3 G; 3 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                            Velculescu V, Vogelstein B, Kinzler K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example; Page 170; 419pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAF40167 standard; DNA; 10 BP.
                                                                                                                                                                                  14-JUN-2000; 2000WO-US016223.
                                                                                                                                                                                                                                                                              (UYJO ) UNIV JOHNS HOPKINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-MAR-2001 (first entry)
                                           Saccharomyces cerevisiae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity 88.5
nes 8; Conservative
  linker; PCR primer; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8 CGCCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-061874/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 CGCCAACGT
                                                                                            WO200077214-A2.
                                                                                                                                                                                                                                  16-JUN-1999;
                                                                                                                                      21-DEC-2000,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF40167;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 47
AAF40167/
XX
AC AAF4
XX
DT 23-M
XX
DE Yeas
XX
ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
```

```
The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previously assigned open reading frame, or nonanotated ORF) genes comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (M1) of using NORF genes to affect the cell cycle comprising administering a NORF gene whose expression varies by at least 10% between any two phases of the cell cycle selected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate cell; and (b) monitoring expression of a NORF gene whose expression of antifungal drug; (a) contexting a test substance which a yeast cell; and (b) monitoring expression of a NORF gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human genes which are involved in cell cycle progression contiguous nucleotides of a NORF gene whose expression varies as in M1; and (4) a method (M4) for identifying a candidate drug as a member of a class of drugs having a characteristic effect on gene expression in a contiguous nucleotides of a NORF gene whose expression is affected by the class of drugs. The NORF genes may be used controling expression in the yeast cell of at least 1 NORF gene whose corpusors of the cell cycle. The captession and for identify candidate drugs which affect the cell cycle cycles and for identification of analy so the cell cycle, the differentially cyclessed genes may be used as markers of phases of the cell cycle. The cycles and for identification of antifungal drugs. ARF33268 to AAF43367 represent invention.

AAF33262 to AAF33267 represent linkers and PCR primers used in the SAGE method, in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                             Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
Yeast; Saccharomyces cerevisiae; characterisation; cell cycle; NORF; nor previously assigned open reading frame; nonannotated ORF; SAGE; serial analysis of gene expression; antifungal; tag; identification; linker; PCR primer; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 2 A; 2 C; 4 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 2.8e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                              Kinzler K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example; Page 246; 419pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВР.
                                                                                                                                                                                                                                 14-JUN-2000; 2000WO-US016223.
                                                                                                                                                                                                                                                                                                                                                            Vogelstein B,
                                                                                                                                                                                                                                                                           99US-00335032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88.98;
                                                                                                                                                                                                                                                                                                                  UYJO ) UNIV JOHNS HOPKINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAF33464 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                       Saccharomyces cerevisiae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 CGGCATCGT 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9 CGCCATCAT 1
                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-061874/07.
                                                                                                                                                WO200077214-A2.
                                                                                                                                                                                                                                                                                                                                                            Velculescu V,
                                                                                                                                                                                                                                                                           16-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-2001
                                                                                                                                                                                          21-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF33464;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAF33464
%XCCCCCCCCCCCCCCCCCCCCCX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      axxxa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previously assigned open reading frame; or nonannotated ORF) genes comprising a SAGE (serial analysis of gene expression) tag. Also comprising a SAGE (serial analysis of gene expression) tag. Also comprising administering a NORF gene whose to affect the cell cycle sclussing two phases of the cell cycle selected from log phase, 5 phase and G2/M; (2) a method (M2) for screening candidate antifungal drugs comprising: (a) contacting a test substance with a yeast cell; and (b) monitoring expression of a NORF gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for dentifying human genes which are involved in cell cycle progression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human DNA with a probe which comprises at least 10 contiguous nucleotides of a NORF gene whose expression varies as in M1, and (4) a method (M4) for identifying a candidate drug as a member of a class of drugs having a characteristic effect on gene expression in a cyeast cell comprising contacting a yeast cell with a candidate drug and contacting expression in the yeast cell with a candidate drug and cyeast cell comprising contacting a yeast cell with a candidate drug and contacting expression is affected by the class of the cell cycle, the differentially expressed genes may be used as markers of phases of the cell cycle. The expressed genes may be used as markers of phases of the cell cycle or defined the cycle and for identification of antifungal drugs. ApR33268 to AAR44064 represent SAGE tags used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                 Yeast; Saccharomyces cerevisiae; characterisation; cell cycle; NORF;
                                                                                 nor previously assigned open reading frame; nonamnotated ORF; SAGE; serial analysis of gene expression; antifungal; tag; identification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAF33262 to AAF33267 represent linkers and PCR primers wethod, in the exemplification of the present invention
                    Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:203.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kinzler K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 26; 419pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF40982 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                 14-JUN-2000; 2000WO-US016223.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                             99US-00335032
                                                                                                                                                                                                                                                                                                                                                                                                     SNINGO NINU ( OLYU)
                                                                                                                                                                              Saccharomyces cerevisiae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8; Conservative
                                                                                                                                    linker; PCR primer; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-061874/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CGGCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sest Local Similarity
                                                                                                                                                                                                                        WO200077214-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Velculescu V,
                                                                                                                                                                                                                                                                                                                                                             16-JUN-1999;
                                                                                                                                                                                                                                                                     21-DEC-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF40982
ID AAF4
XX
ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         셤
```

Yeast, Saccharomyces cerevisiae; characterisation, cell cycle, NORF, nor previously assigned open reading frame; nonannotated ORF, SAGE, serial analysis of gene expression; antifungal; tag; identification;

Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:2700.

(first entry)

23-MAR-2001

AAF35961;

AAF35961/c ID AAF35961 standard; DNA; 10 BP.

```
The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previously assigned open reading frame; or nonamnotated ORF) genes coding sequence of a yeast gene selected from Jog comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (M1) of using NORF genes to affect the cell cycle selected from log phase, 5 phase and G2/M; (2) a method (M2) for screening candidate contituous antifungal drugs comprising: (a) contacting a test substance with a yeast cell; and (b) monitoring expression of a NORF gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for cell; and (b) monitoring expression of a NORF gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for cell; and (b) monitoring expression of a NORF gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human genes which are involved in cell cycle progression contiguous nucleotides of a NORP gene whose expression varies as in M1; and (4) a method (M4) for identifying a candidate drug as a member of a class of drugs having a characteristic effect on gene expression in a cyeast cell with a candidate drug and cyeast cell comprising contacting a yeast cell with a candidate drug and cyeast cell comprising contacting a yeast cell with a candidate drug and cyeast cell comprising contacting a yeast cell with a candidate drug and cyeast cell comprising contacting a yeast cell with a candidate drug and cyeast cell comprises of drugs whose expression is affected by the class of drugs. The NORP gene whose cycle and for identification of antidate drugs which affect the cell cycle and for identification of antidate drugs which affect the cell cycle and for identification of antidate drugs which affect the cell cycle represent SAGE tags used in the exemplification of the present invention.

Cycle and cycle and for identification of the prese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.
                                                                                                                                                                                                                                                                                                         Yeast; Saccharomyces cerevisiae; characterisation; cell cycle; NORF;
                                                                                                                                                                                                                                                                                                                               nor previously assigned open reading frame; nonannotated ORF; SAGE; serial analysis of gene expression; antifungal; tag; identification; linker; PCR primer; ds.
                                                                                                                                                                                                  Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:7721.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10 BP; 2 A; 4 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kinzler K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example; Page 275; 419pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-JUN-2000; 2000WO-US016223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99US-00335032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYJO ) UNIV JOHNS HOPKINS
                                                                                            23-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Saccharomyces cerevisiae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-061874/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200077214-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jelculescu V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-DEC-2000
AAF40982;
```

Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.

Example; Page 96; 419pp; English.

Kinzler K;

Velculescu V, Vogelstein B,

WPI; 2001-061874/07.

(UYJO) UNIV JOHNS HOPKINS

14-JUN-2000; 2000WO-US016223

Saccharomyces cerevisiae

WO200077214-A2.

21-DEC-2000.

linker; PCR primer;

99US-00335032

16-JUN-1999;

```
The present lime furcation describes an isolater Comparison of TAS NORP (not previously assigned open reading frame; or nonannotated ORP) genes coding sequence of a yeast gene selected from a group of 745 NORP (not previously assigned open reading frame; or nonannotated ORP) genes of comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (M1) of using NORP genes to affect the cell cycle comprising administering a NORP gene whose expression varies by at class to the between any two phases of the cell cycle selected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate antifungal drugs comprising; (a) contacting a test substance with a yeast cell; and (b) monitoring expression of a NORP gene whose expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human genes which are involved in cell cycle progression of identifying human genes which are involved in cell cycle progression of identifying a candidate drug as a member of a contiguous nucleotides of a NORP gene whose expression in a contiguous nucleotides of a nord identification day have cell of at least 1 NORP genes may be used contitoring expression in the yeast cell of at least 1 NORP genes may be used to dentify candidate drugs which affect the cell cycle and for identification of antifungal drugs. ARF33268 to AAF44064 crepresent SAGS tags used in the exemplification of the present invention.

AAF33262 to AAF33267 represent linkers and PCR primers used in the SAGE crepted in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          present invention describes an isolated DNA molecule comprising a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 10 BP; 2 A; 4 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 GTGGCATCG 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
```

ö

ö

Gaps

;

46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; Live 0; Mismatches 1; Indels

Similarity 88.9%; 8; Conservative

Best Local Similarity Matches 8; Conserv

ò

Query Match

4 CGGGCGGCA 12

```
The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previously assigned open reading frame, or nonamnotated ORF) genes comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (M1) of using NORF genes to affect the cell cycle comprising administering a NORF gene whose expression varies by at least 10% between any two phases of the cell cycle selected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate contiguous lucy ecomprising: (a) contexting a test substance with a yeast cell; and (b) monitoring expression of a NORF gene whose expression of varies as in M1, where a test substance which modifies the expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human genes which are involved in cell cycle progression of contiguous nucleotides of a NORF gene whose expression in a contiguous nucleotides of a NORF gene whose expression in a contiguous nucleotides of a NORF gene whose expression in a contiguous nucleotides of a NORF gene whose expression in a contiguous nucleotides of a NORF gene whose expression in a contiguous nucleotides of a NORF gene whose expression is affected by the class of drugs. The NORF genes may be used to strictung a yeast cell with a method (M4) for identifying a candidate drug as a member of a contiguous nucleotides of a NORF gene whose expression is affected by the class of the cell cycle, the differentially cexpressed genes may be used to identify candidate drugs which affect the cell cycle and for identify candidate drugs which affect the cell cycle and for identify candidate drugs which affect the cell cycle and for identify candidate drugs which affect the cell cycle and for identify candidate drugs which affect the cell cycle and for identify candidate and for iden
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.
                                                                                                                                                                                                                                          Yeast; Saccharomyces cerevisiae; characterisation; cell cycle; NORF; nor previously assigned open reading frame; nonamnotated ORF; SAGE; serial analysis of gene expression; antifungal; tag; identification; linker; PCR primer; ds.
                                                                                                                                                                                                Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:374.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kinzler K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 388; 419pp; English.
                                                AAF33635 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Velculescu V, Vogelstein B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-JUN-2000; 2000WO-US016223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-00335032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYJO ) UNIV JOHNS HOPKINS.
                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                        Saccharomyces cerevisiae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-061874/07.
                                                                                                                                                                                                                                                                                                                                                                                                                      WO200077214-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16-JUN-1999;
                                                                                                                                                  23-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-DEC-2000
                                                                                               AAF33635;
RESULT 479
                         AAF33635
```

Yeast gene coding sequences comprising NORF genes with serial analysis of gene expression (SAGE) tags, useful for studying, monitoring and affecting phases of the cell cycle.

Example; Page 160; 419pp; English.

```
Query Match 46.3%; Score 7.4; DB 1; Length 10; Best Local Similarity 88.9%; Pred. No. 2.8e+02; Matches 8; Conservative 0; Mismatches 1; Indels
```

```
Yeast; Saccharomyces cerevisiae; characterisation; cell cycle; NORF; nor previously assigned open reading frame; nonannotated ORF; SAGE; serial analysis of gene expression; antifungal; tag; identification;
                                                                                    Yeast NORF gene SAGE tag oligonucleotide SEQ ID NO:4484.
                                                                                                                                                                                                                Velculescu V, Vogelstein B, Kinzler K;
                                             AAF37745 standard; DNA; 10 BP
                                                                                                                                                                                      99US-00335032.
                                                                                                                                                                         14-JUN-2000; 2000WO-US016223.
                                                                       23-MAR-2001 (first entry)
                                                                                                                                                                                                   SNINGO NINU ( OLYU)
                                                                                                                                  Saccharomyces cerevisiae.
                                                                                                                     linker; PCR primer; ds.
            CGGCGGGTG 10
                                                                                                                                                                                                                              WPI; 2001-061874/07.
                                                                                                                                               WO200077214-A2.
                                                                                                                                                                                      16-JUN-1999;
                                                                                                                                                             21-DEC-2000.
                                                          AAF37745;
                               RESULT 48
                                                    ઠ
           셤
```

The present invention describes an isolated DNA molecule comprising a coding sequence of a yeast gene selected from a group of 745 NORF (not previoually assigned open reading frame; or nonamontated ORP) genes comprising a SAGE (serial analysis of gene expression) tag. Also described are: (1) a method (M1) of using NORF genes to affect the cell cycle comprising administering a NORF gene whose expression varies by at least 10% between any two phases of the cell cycle selected from log phase, S phase and G2/M; (2) a method (M2) for screening candidate cell; and (b) monitoring expression of a NORF gene whose expression of antifungal drugs (a) contacting a test substance which see expression of the yeast gene is a candidate antifungal drug; (3) a method (M3) for identifying human genes which are involved in cell cycle progression of comprising contacting human DNA with a probe which comprises at least 10 contiguous nucleotidaes of a NORF gene whose expression in a contiguous nucleotidaes of a NORF gene whose expression in a contiguate drug and contacting a yeast cell with a candidate drug and contacting expression in the yeast cell of a least 1 NORF gene whose corpusions is affected by the class of the cell with a candidate drug and contacting expression in the yeast cell of at least 1 NORF gene may be used to study, monitor and affect phases of the cell cycle, the differentially expression is affected by the class of the cell cycle, the differentially expression is a markers of phases of the cell cycle, the differentially expression is a markers of phases of the cell cycle, the differentially expression is a markers of phases of the cell cycle, the differentially cycle cycle and for identify candidate drugs which affect the cell cycle and for identify candidate drugs which affect the cell cycle and for identify candidate drugs and for identify candidate drugs and for identify candidate drugs which are cell cycle and for identify candidate drugs which are candidated and for identify candidate drugs and contacting ex represent SAGE tags used in the exemplification of the present invention AAF33262 to AAF33267 represent linkers and PCR primers used in the SAGE

Sequence 10 BP; 0 A; 2 C; 7 G; 1 T; 0 U; 0 Other;

0

Gaps

.; 0

method, in the exemplification of the present invention

46.3%; Score 7.4; DB 1; Length 10;

```
ó
                 Gaps
                 ;
                 Indels
Pred. No. 2.8e+02;
               0; Mismatches
       88.9%;
               Conservative
        Best Local Similarity
               Matches
```

ceeceeere 10 1 CGGCGGGCG ò g

AAS98385 standard; DNA; 10 BP. AAS98385; RESULT 481

(first entry) 12-MAR-2002 Galanin receptor; GALR1; human; single nucleotide polymorphism; SNP; drug discovery; haplotyping; infectious diarrhoea; growth hormone deficiency; allele-specific oligonucleotide; ss.

Galanin receptor gene GALR1 allele-specific oligonucleotide #97.

WO200179237-A2

25-OCT-2001

16-APR-2001; 2001WO-US012306.

14-APR-2000; 2000US-0197838P.

(GENA-) GENAISSANCE PHARM INC.

Nandabalan K; Denton RR, Choi JY, Chew A, Bentivegna SC,

WPI; 2002-066341/09.

Genotyping human galanin receptor gene of an individual for determining haplotype of an individual, involves determining the identity of nucleotide pair at specific polymorphic sites for two copies of the gene.

haplotype of an individual, involves determining the identity of nucleotide pair at specific polymorphic sites for two copies of the gene.

Claim 18; Page 16; 99pp; English.

Claim 18; Page 16; 99pp; English.

The invention relates to genotyping human galamin receptor (GALRI) gene of an individual, involving determining for the two copies of the GALRI cene present in the individual, the identity of the nucleotide pair at one or more polymorphic sites. The method is useful for determining whether an individual has a haplotype or haplotype pairs defined in the specification. This is useful for improving the efficacy and reliability of several steps in the discovery and development of drugs for treating diseases associated with GALRI activity, e.g., infectious diarrhoea and creating a specific condition or disease predicted to be associated with GALRI activity, and in the design of clinical trials of candidate drugs for treating a specific condition or disease predicted to be associated with GALRI activity. The method is useful to screen for compounds with GALRI activity. A GALRI polynucleotide or variant is useful in studying the expression and function of GALRI, and in expressing GALRI protein for use in screening for candidate drugs to treat disease related to GALRI activity. The polynucleotide or variant is useful for studying expression of the GALRI isogenes in vivo, for in vivo screening and testing of drugs cargeted against GALRI protein, and for studying the effect of the affinity of candidate activity of GALRI protein, and for studying the effect of the affinity of candidate activity of GALRI protein, and for studying the effect of the affinity of candidate activity of GALRI protein, and for studying the effect of the affinity of candidate activity of GALRI protein, and the studying the effect of the affinity of candidate activity of GALRI protein, and the biological activity of GALRI acceptance against GALRI protein, and the studying the effect of the affinity of candidate activity of GALRI acceptance activity of GALRI acceptance activity of GALRI acceptance infections diarrhoea and growth hormone insufficiency. AAS98289- AAS98408 represent human GALR1 gene allele-specific oligonucleotides used to detect GALR1 gene polymorphisms as described in the method of the candidate drugs targeting GALR1 for the treatment

Sequence 10 BP; 0 A; 8 C; 1 G; 1 T; 0 U; 0 Other;

```
ö
                                                                                                                                                                                                                                                                                                                    Genotyping human galanin receptor gene of an individual for determining
                   Gaps
                                                                                                                                                    Galanin receptor; GALR1; human; single nucleotide polymorphism; SNP; drug discovery; haplotyping; infectious diarrhoea; growth hormone deficiency; allele-specific oligonucleotide; 88.
                                                                                                                                      Galanín receptor gene GALR1 allele-specific oligonucleotide #100.
                   ;;
                                                                                                                                                                                                                                                                                    Denton RR, Nandabalan K;
 Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                     Choi JY,
                                                                                         BP.
                                                                                                                                                                                                                                                                     (GENA-) GENAISSANCE PHARM INC
46.3%;
                                                                                                                                                                                                                                     16-APR-2001; 2001WO-US012306.
                                                                                                                                                                                                                                                     14-APR-2000; 2000US-0197838P.
                                                                                       AAS98388 standard; DNA; 10
                                                                                                                       (first entry)
                  8; Conservative
                                                                                                                                                                                                                                                                                     Bentivegna SC, Chew A,
                                 2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                    WPI; 2002-066341/09.
 Query Match
Best Local Similarity
Matches 8; Conserv
                                            10 GGAGGGCGG
                                                                                                                                                                                                      WO200179237-A2
                                                                                                                                                                                       Homo sapiens.
                                                                                                                       12-MAR-2002
                                                                                                                                                                                                                     25-OCT-2001.
                                                                                                       AAS98388;
                                               셤
                                                                                               ઠે
```

The invention relates to genotyping human galanin receptor (GALRI) gene of an individual, involving determining for the two copies of the GALRI come or more polymorphic sites. The identity of the nucleotide pair at one or more polymorphic sites. The method is useful for determining whether an individual has a haplotype or haplotype pairs defined in the specification. This is useful for improving the efficacy and reliability of several steps in the discovery and development of drugs for treating diseases associated with GALRI activity, e.g., infectious diarrhoea and creating a specific condition or disease predicted to be associated with GALRI activity, and in the deeds of clinical trials of candidate drugs for treating a specific condition or disease predicted to be associated with GALRI activity. The method is useful to screen for compounds targeting GALRI to treat a specific conditions or disease associated with GALRI activity. A GALRI polymucleotide or variant is useful in studying the expression and function of GALRI, and in expressing GALRI protein for use in screening for candidate drugs to treat diseases related to GALRI activity. The polymucleotide or variant is useful for studying expression of the GALRI protein, and for studying the effect of the cariation on the biological activity of GALRI as well as on the binding affinity of candidate drugs targeting GALRI as well as on the binding affinity of candidate drugs targeting GALRI seed to the content of infectious diarrhoea and growth hormone insufficiency. AAS98189. AAS98408 infectious diarrhoea and growth hormone insufficiency. ASS98289. AAS98408 content whan GALRI gene polymorphisms as described in the method of the invention

Seguence 10 BP; 0 A; 3 C; 7 G; 0 T; 0 U; 0 Other;

```
ö
                                                                                                                                                                                                                                                                                                                                                      Genotyping human galanin receptor gene of an individual for determining haplotype of an individual, involves determining the identity of nucleotide pair at specific polymorphic sites for two copies of the gene.
                   Gaps
                                                                                                                                                                      Galanin receptor, GALR1; human; single nucleotide polymorphism; SNP; drug discovery; haplotyping; infectious diarrhoea; growth hormone deficiency; allele-specific oligonucleotide; ss.
                                                                                                                                                      Galanin receptor gene GALR1 allele-specific oligonucleotide #82.
                   ;
0
                                                                                                                                                                                                                                                                                                                     Denton RR, Nandabalan K;
Length 10;
                  1; Indels
.4; DB 1;
O. 2.8e+02;
Score 7.4; DB Pred. No. 2.8e+0; Mismatches
                                                                                                                                                                                                                                                                                                                    Choi JY,
                                                                                                  BP.
                                                                                                                                                                                                                                                                                                   (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                 14-APR-2000; 2000US-0197838P.
46.3%;
                                                                                                                                                                                                                                                               16-APR-2001; 2001WO-US012306
                                                                                                AAS98370 standard; DNA; 10
                                                                                                                                    (first entry)
                  8; Conservative
                                                                                                                                                                                                                                                                                                                     Chew A,
                                   2 GGCGGGCGG 10
                                                    2 GGCGCGCGG 10
                                                                                                                                                                                                                                                                                                                                      WPI; 2002-066341/09.
Query Match
Best Local Similarity
                                                                                                                                                                                                                            WO200179237-A2.
                                                                                                                                                                                                                                                                                                                     Bentivegna SC,
                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                    12-MAR-2002
                                                                                                                                                                                                                                              25-OCT-2001.
                                                                                                                  AAS98370;
                                                                                RESULT 483
                  Matches
                                                                                                           ò
                                                    유
```

Claim 18; Page 16; 99pp; English

The invention relates to genotyping human galanin receptor (GALRI) gene of an individual, involving determining for the two copies of the GALRI con an individual, inclaived in the individual, the identity of the nucleotide pair at cone or more polymorphic sites. The method is useful for determining whether an individual has a haplotype or haplotype pairs defined in the specification. This is useful for improving the efficacy and reliability of several steps in the discovery and development of drugs for treating diseases associated with GALRI activity, e.g., infectious diarrhoea and growth hormone deficiency, to validate GALRI as a candidate agent for treating a specific condition or disease predicted to be associated with GALRI activity, and in the design of clinical trials of candidate drugs for treating a specific condition or disease predicted to be associated with GALRI activity. The method is useful to complete to careen for compounds targeting GALRI to treat a specific conditions or disease associated with GALRI activity. The method is useful for variant is useful in studying crargeting GALRI activity. The polynucleotide or variant is useful for studying expression of the expression and function of GALRI, and in expressing GALRI protein for activity. The polynucleotide or variant is useful for studying expression of the GALRI protein, and for studying such the binding craritation on the biological activity of GALRI as well as on the binding affections diarrhoea and growth hormone insufficiency. AAS99289- AAS98408 represent human GALRI gene applymorphisms as described in the method of the invention

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                    Genotyping human galanin receptor gene of an individual for determining haplotype of an individual, involves determining the identity of nucleotide pair at specific polymorphic sites for two copies of the gene.
                                       Gaps
                                                                                                                                                                                                              Galanin receptor; GALR1; human; single nucleotide polymorphism; SNP; drug discovery; haplotyping; infectious diarrhoea; growth hormone deficiency; allele-specific oligonucleotide; ss.
                                                                                                                                                                                            Galanin receptor gene GALR1 allele-specific oligonucleotide #93.
                                       ;
                                                                                                                                                                                                                                                                                                                                                                               Denton RR, Nandabalan K;
                  Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
Sequence 10 BP; 1 A; 1 C; 8 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                              Choi JY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 18, Page 16, 99pp, English.
                                       0,
                                                                                                                               AAS98381 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                            (GENA-) GENAISSANCE PHARM INC
                   46.3%;
                                                                                                                                                                                                                                                                                                                    16-APR-2001; 2001WO-US012306.
                                                                                                                                                                                                                                                                                                                                       14-APR-2000; 2000US-0197838P.
                                                                                                                                                                        12-MAR-2002 (first entry)
                                       8; Conservative
                                                                                                                                                                                                                                                                                                                                                                               Bentivegna SC, Chew A,
                                                           2 GGCGGGCGG 10
                                                                              GGAGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2002-066341/09.
                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                            WO200179237-A2
                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                25-OCT-2001.
                                                                                                                                                     AAS98381;
                                      Matches
                                                                                                                       AAS98381,
 S
                                                           ò
                                                                             유
```

The invention relates to genotyping human galanin receptor (GALRI) gene of an individual, involving determining for the two copies of the GALRI cone or more polymorphic sites. The method is useful for determining whether an individual has a haplotype or haplotype pairs defined in the cone or more polymorphic sites. The method is useful for determining whether an individual has a haplotype or haplotype pairs defined in the cone or more polymorphic sites. The method is useful for determining whether an individual has a haplotype pairs defined in the cone or specification. This is useful for improving the efficacy and reliability of several steps in the discovery and development of drugs for treating diseases associated with GALRI activity, and in the design of clinical trials of candidate agent for treating a specific condition or disease predicted to be associated with GALRI activity. The method is useful to screen for compounds with GALRI activity. A GALRI polymorleotide or variant is useful in studying creating charactivity. The pulymorleotide or variant is useful for studying expression continuous of the capted day polymorleotide or variant is useful for studying expression of the GALRI isogenes in vivo, for in vivo screening and testing of drugs targeted against GALRI protein, and for studying the effect of the cardidate drugs targeting GALRI for the treatment of affinity of candidate drugs targeting GALRI for the treatment of affinity of candidate drugs targeting GALRI for the treatment of infectious diarrhoea and growth hormone insufficiency. AAS98289- AAS98408 crepression thuman GALRI gene allele-specific oligonucleotides used to invention

ö

Gaps

; 0

```
The invention relates to genotyping human galanin receptor (GALRI) gene of an individual, involving determining for the two copies of the GALRI content in the individual, the identity of the nucleotide pair at one or more polymorphic sites. The method is useful for determining whether an individual has a haplotype or haplotype pairs defined in the specification. This is useful for improving the efficacy and reliability of several steps in the discovery and development of drugs for treating diseases associated with GALRI activity, e.g., infectious diarrhoea and creating a specific condition or disease predicted to be associated with GALRI activity, and in the design of clinical trials of candidate drugs creating a specific condition or disease predicted to be associated with GALRI activity. The method is useful to screen for compounds with GALRI activity. The method is useful to screen for compounds the expression and function of GALRI, and in stypessing GALRI protein for use in screening for candidate drugs to treat diseases associated with GALRI activity. The polymucleotide or variant is useful for studying expression of the polymucleotide or variant is useful for studying expression of the biological activity of GALRI as well as on the binding craffication on the biological activity of GALRI as well as on the binding crafficated dariant GALRI gene arregeting GALRI as well as on the binding crafficated dariant dariant mome insufficiency. AAS98289- AAS98408 represent human GALRI gene allele-specific oligonucleotides used to detect GALRI gene polymorphisms as described in the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Genotyping human galanin receptor gene of an individual for determining haplotype of an individual, involves determining the identity of nucleotide pair at specific polymorphic sites for two copies of the gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Galanin receptor; GALR1; human; single nucleotide polymorphism; SNP; drug discovery; haplotyping; infectious diarrhoea; growth hormone deficiency; allele-specific oligonucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                                                       Galanin receptor gene GALR1 allele-specific oligonucleotide #103.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nandabalan K;
                                     46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; tive 0; Mismatches 1; Indels
Sequence 10 BP; 1 A; 6 C; 1 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Denton RR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Choi JY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 18; Page 16; 99pp; English.
                                                                                                                                                                                                                                                                           AAS98391 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GENA-) GENAISSANCE PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-APR-2001; 2001WO-US012306.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-APR-2000; 2000US-0197838P
                                                                                                                                                                                                                                                                                                                                                             12-MAR-2002 (first entry)
                 Query Match
Best Local Similarity 86.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chew A,
                                                                                                                         5 GGCCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2002-066341/09.
                                                                                                                                                                   GGCCGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200179237-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bentivegna SC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-OCT-2001
                                                                                                                                                                                                                                                                                                                     AAS98391;
                                                                                                                                                                                                                                 RESULT 485
                                                                                                                                                                                                                                                     AAS98391
                                                                                                                           8
                                                                                                                                                                   셤
```

```
The patent discloses novel genetic variants of human apolipoprotein E
(APOE) gene. The invention also relates to compositions and methods for
haplotyping and/or genotyping the APOE gene. The haplotyping methods of
the invention are useful for improving the efficacy and reliability of
several steps in the discovery and development of drugs for treating
diseases associated with APOE activity, e.g. familial
dysbetalipoproteinaemia, type III hyperlipoproteinaemia, atherosclerosis,
and Alzheimer's disease. They are useful to validate APOE as a candidate
agent for treating a specific condition or disease predicted to be
associated with APOE activity and in the design of clinical trials of
candidate drugs for treating a specific condition or disease predicted to
be associated with APOE activity. Genotyping or haplotyping methods are
useful to screen for compounds targeting APOE to treat a specific
condition or disease associated with APOE activity. The present DNA
sequence is a primer which is used for detecting human APOE gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genotyping human apolipoprotein gene of individual for determining haplotype of individual, involves determining identity of nucleotide pair at specific polymorphic sites for two copies of gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Human, antilipaemic; neuroprotective; nootropic; genetic variant; APOE; apolipoprotein E; haplotyping; familial dysbetalipoproteinaemia; therapy; genotyping; type III hyperlipoproteinaemia; Alzheimer's disease; atherosclerosis; polymorphism; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                        Human apolipoprotein E (APOE) gene polymorphism detecting primer #26.
                                                                                                                     Gaps
                                                                                                                     ö
                                                                         46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                 1; Indels
                                     Sequence 10 BP; 0 A; 7 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 1 A; 5 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lee HH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 18; Page 15; 78pp; English.
                                                                                                                                                                                                                                                                                        AAD26103 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Koshy B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16-APR-2001; 2001WO-US012303.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14-APR-2000; 2000US-0197188P
                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                             Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                       2 GGCGGGCGG 10
                                                                                                                                                                                           GGCGCGCGG 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Choi JY, Kliem SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2002-075064/10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200179234-A2.
                                                                                                                                                                                                                                                                                                                                                                  26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-OCT-2001.
 invention
                                                                                                                                                                                                                                                                                                                              AAD26103;
                                                                         Query Match
SXS
                                                                                                                                                       ð
                                                                                                                                                                                         셤
```

ö

Gaps

;

Query Match 46.3%; Score 7.4; DB 1; Length 10; Best Local Similarity 88.9%; Pred. No. 2.8e+02; Matches 8; Conservative 0; Mismatches 1; Indels

```
WO200222644-A1.
 JP2001327293-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-MAR-2002.
                    27-NOV-2001
                                                                                                                                                                                                                                                                                                                                   m
                                                                                                                                                                                                                                                                                                                                                                                                                          ABK70551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Koshy B,
                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                    RESULT 489
                                                                                                                                                                                                                                                                                                                                                                                               ABK70551/c
  ò
                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                            activation DC. Also described are: (1) a protein expressed by the above human maturation/activation DC expression gene; (2) an antibody against the protein; and (3) an antagonist against the expression of each gene belonging to the above gene group. The gene group is useful for the treatment and the diagnosis of various human diseases related to human DC. ABL4267 to ABL4296 represent specifically claimed human maturation/activation C expression gene tags from the present invention
                                                                                                                                                                                                                                                                                                                                                              The present invention describes a human maturation/activation dendritic cell (DC) expression gene group consisting of 100 genes which show the highest expression among the genes expressed in human maturation/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                               Human maturation/activation dendritic cell expression gene tag #213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human maturation/activation dendritic cell expression gene tag #53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; maturation/activation dendritic cell expression gene; tag; maturation; activation; dendritic cell; ss.
                                                                                                                                                 Human; maturation/activation dendritic cell expression gene; tag; maturation; activation; dendritic cell; ss.
                                                                                                                                                                                                                                                                                                                        Human maturation/activation dendritic cell expression gene group.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 BP; 1 A; 4 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                                                 (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN
                                                                                                                                                                                                                                                                                                                                             Claim 19; Page 15; 41pp; Japanese.
                                                                     ABL42839 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABL42679 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                           22-MAY-2000; 2000JP-00150562.
                                                                                                                                                                                                                                                              22-MAY-2000; 2000JP-00150562
                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 CGACGGGCG 10
eceeecec 11
                  Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CGGCGGGCG 9
                                                                                                                                                                                                                                                                                                     WPI; 2002-127070/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                  JP2001327293-A.
                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12-APR-2002
                                                                                                           12-APR-2002
                                                                                                                                                                                                                       27-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABL42679;
                                                                                         ABL42839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         a
8
                 셤
```

```
The present invention describes a human maturation/activation dendritic cell (DC) expression gene group consisting of 100 genes which show the highest expression among the genes expressed in human maturation/activation DC. Also described are: (1) a protein expressed by the above human maturation/activation DC expression gene; (2) an antibody against the protein; and (3) an antagonist against the expression of each gene belonging to the above gene group. The gene group is useful for the treatment and the diagnosis of various human diseases related to human DC. ABL4226 represent specifically claimed human maturation/activation DC expression gene tags from the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel genetic variants of G protein-coupled receptor 7 gene useful for therapeutic purposes and for expressing GPR7 protein useful in identifying drugs to treat psychological and neurological disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                Human maturation/activation dendritic cell expression gene group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; G protein-coupled receptor 7; GPR7; haplotyping; SNP; psychological disorder; neurological disorder; PCR; 88; single nucleotide polymorphism.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human G protein-coupled receptor 7 allele-specific primer #11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN
                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 10; 41pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 18; Page 13; 69pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tirrell C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GENA-) GENAISSANCE PHARM INC.
22-MAY-2000; 2000JP-00150562.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17-SEP-2001; 2001WO-US029207.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-SEP-2000; 2000US-0232900P.
                                                              22-MAY-2000; 2000JP-00150562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABK70551 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-JUL-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 8b.,
8, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sanchis A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2002-383121/41.
                                                                                                                                                                                                 WPI; 2002-127070/17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    255255225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200000000
```

3 geggeegec 11 9 GCGGTCGGC 1 22-JUL-2002 ABL60208; RESULT 490 셤

ö Human; mucin 1; MUC1; transmembrane protein; SNP; cancer; cytostatic; single nucleotide polymorphism; haplotyping; genotyping; drug; antiinflammatory; PCR; primer; 88. Gaps ö Query Match
Best Local Similarity 88.9%; Pred. No. 2.8e+02;
Matches 8; Conservative 0; Mismatches 1; Indels Sequence 10 BP; 1 A; 5 C; 3 G; 1 T; 0 U; 0 Other; Human MUC1 PCR primer SEQ ID NO 52. ABL60208 standard; DNA; 10 BP. (first entry)

ઠે The invention relates to an isolated polymuclacotide (I) comprising a multicotide sequence which is a polymorphic variant of a reference sequence for a grpt. Only or its fragment or sequence for G-protein coupled receptor 7 (GRR7) gene or its fragment or sequence for G-protein coupled receptor 7 (GRR7) gene or its fragment or greatening the relations of the sequence of G-protein coupled receptor 7 (GRR7) gene or its fragment or fragment. The encoded polypeptide (II) is useful for identifying an association between a trait auch as a clinical response to a drug targeting GRR7 and septemballity in developing disgnostic relate and therapeutic treatments percentage for candidate drugs to creat diseases related to GRR7 and sexpression and function of GRR7 and expression gRR7 percent for use in stressing for candidate drugs to treat diseases related to GRR7 activity. The polymorphism and haplotype data are useful for valueding whether of RR7 is a suitable target for drugs to treat psychological and clustoped data are useful for valueding whether of RR7 is a suitable earget for drugs to treat psychological and clustoped data are useful for valueding whether of RR7 is set in the GRR7 haplotype of a palpotype and relability of several steps in clustoped grad development of drugs for treating diseases associated with GRR7 activity psychological and neurological disorders. For exactivity psychological and neurological disorders are pagetic condition or disease predicted to be associated with GRR7 activity psychological and neurological disorders on to screen consomonals that display the highest desired agonist or anagonist activity for cach of the most frequent GRR7 isoforms present in the population with the specific condition or disease of population in the specific condition or disease predicted to be associated with GRR7 activity for cach of the most frequent GRR7 isoforms present in the fortion of the variation on the biological activity of cach of the warfation on the biological activity of cach of the variation on t

New genetic variants of mucin 1, Transmembrane gene, useful in studying expression and function of protein encoded by the gene and for screening

drugs to treat diseases e.g. cancer. Claim 16; Page 14; 75pp; English.

(GENA-) GENAISSANCE PHARM INC. 28-SEP-2000; 2000US-0236113P. 25-SEP-2001; 2001WO-US030151

WO200226765-A2.

04-APR-2002.

Homo sapiens.

WPI; 2002-405042/43.

Koshy B;

Chew A,

The invention relates to a polymucleotide (ABL60158, ABL60159) encoding mucin 1/MUC1 (ABB77476), Transmembrane isogene. The invention describes cover genetic variants of the MUC1 gene. The invention is useful for movel genetic variants of the MUC1 gene. The invention is useful for association between a trait and at least one of the haplotypes or association between a trait and at least one of the haplotypes or candidate drugs to treat diseases related to MUC1 protein for use in screening for candidate drugs to treat diseases related to MUC1 activity and in studying the effect of the variation on the biological activity of MUC1 candidate drugs to treat diseases related to MUC1 activity and in the treatment of e.g. cancer. MUC1 is further used by the pharmaceutical cressarch scientist to validate MUC1 as a candidate target for and in design of clinical trials of candidate drugs for, treating a specific condition drugs or disease predicted to be associated with MUC1 activity. MUC1 antibodies are useful in a variety of diagnostic and prognostic formats and therapeutic methods. The present sequence is that of a PCR primer for detecting MUC1 polymorphisms, useful to the invention ö Gaps ö 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; 1; Indels Sequence 10 BP; 2 A; 3 C; 5 G; 0 T; 0 U; 0 Other; 0; Mismatches 8; Conservative 3 GCGGGCGC 11 Best Local Similarity Matches 8; Conserv 셤

RESULT 491 AAD26185

Human endothelin 2 (EDN2) gene polymorphism detecting primer #24. BP. AAD26185 standard; DNA; 10 26-MAR-2002 (first entry) AAD26185;

Human, endothelin 2; EDN2; polymorphic site; PS; therapy; hypertension; drug screening; cardiovascular disorder; renal insufficiency; ASO; allele specific oligonucleotide; cerebroprotective; polymorphism; hypotensive; cerebrovascular condition; primer; ss.

WO200190118-A2. Homo sapiens.

29-NOV-2001.

21-MAY-2001; 2001WO-US016433.

```
The invention comprises DNA, cDNA and protein sequences of the human electron-transfer flavoprotein, beta polypeptide (ETFB) gene (located on electron-transfer flavoprotein, beta polypeptide (ETFB) gene (located on carcamome 19413.3-13.4). The invention specifically relates to the identification of 27 novel polymorphic sites within the ETFB gene.

C clor mine primary flavoprotein (ETF) is an obligatory electron acceptor components and is located in the mitochondrial matrix. ETF is composed of an alpha (ETFA) and a beta (ETFB) subunit. Electrons accepted by ETF are transferred to the mitochondrial respiratory chain by ETF are transferred to the component ETFB polymorphisms identified in the invention are useful compounds for genotyping and haplotyping the ETFB gene of an individual. The ETFB protein and nucleic acids of the invention are useful for studying the efficacy of therapeutic agents and compounds for glutaric acidsenia type II. The nucleic acids of the invention are useful for testing the efficacy of therapeutic agents and compounds for glutaric acidsenia type II. The nucleic acids of the invention are useful for testing the efficacy of therapeutic agents and compounds for glutaric acidsenia type II. The nucleic acids of the invention are useful in the production of a transgenic animal expressing the ETFB gene. Nucleic acids ABL39414-ABL39494 represent claimed ETFB conserved of all alleacypes of the ETFB and alleacype acids ABL39414-ABL39494 represent claimed ETFB and alleacype acids ABL39414-ABL39494 represent claimed alleacype acids are alleacype acids ABL394141-ABL39494 represent claimed acids 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New zinc finger protein that binds to target site, useful in studying gene function and for human therapeutics and plant engineering, comprises
                                                                useful for therapeutic purposes, for studying the expression and function of the polynucleotide, and for expressing the flavoprotein.
                                           Novel isolated human electron-transfer-flavoprotein, beta polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zinc finger protein related oligonucleotide target SEQ ID NO:1284.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zinc finger protein; ZFP; DNA binding protein; zinc finger; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     represent claimed ETFB primer-extension oligonucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 0 A; 2 C; 8 G; 0 T; 0 U; 0 Other;
                                                                                                                                   Claim 19; Page 15; 143pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (SANG-) SANGAMO BIOSCIENCES INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABQ71550 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-NOV-2000; 2000US-00716637.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-NOV-2001; 2001WO-US043438.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-AUG-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 88.9
les 8, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-500284/53.
  WPI; 2002-154722/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GCGGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200242459-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABQ71550;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Liu Q;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
  ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to genetic variants of human endothelin 2 (EDN2)

gene. EDN2 gene contains 17 polymorphic sites PS1-PS17. The polymorphic
variants are useful in studying the expression and function of EDN2, in
expressing EDN2 protein for use in screening for candidate drugs to treat
diseases related to EDN2 activity, in studying the effect of the
variation on the biological activity of EDN2, and the binding affinity of
candidate drugs targetting EDN2 for the treatment of hypertension,
cardiovascular disorders, renal insufficiency and cerebrovascular
conditions. The haplotyping methods are useful in validating EDN2 as a
candidate target for treating a specific condition or disease predicted
to be associated with EDN2 activity, or in the design of clinical trials
of candidate drugs for treating a specific condition or disease
associated with EDN2 activity, Allele specific oligonucleotides (ASO) are
used as probes and primers, and for detecting polymorphism in EDN2 gene.
The present sequence is a primer used to detect polymorphism in human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                New human endothelin 2 (EDN2) polymorphic variants and encoding genes, useful in expressing EDN2 protein for screening candidate drugs to treat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; electron-transfer flavoprotein beta polypeptide; ETFB; electron acceptor; mitochondrial matrix; glutaric acidaemia type II; novel polymcyphics it; novel polymcyphism; ETFB genotype; as; GAII; ETFB haplotype; transgenic animal; primer; probe; chromosome 19q13; primer-extension oligonucleotide; single nucleotide polymorphism; SNP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bentivegna SC, Bieglecki KM, Kazemi A, Koshy B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 1 A; 2 C; 7 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human ETFB primer-extension oligonucleotide 17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                              diseases related to EDN2 activity.
                                                                                                                                                                                                                                                                                        Claim 18; Page 15; 91pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABL39511 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GENA-) GENAISSANCE PHARM INC.
                                                              (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUL-2000; 2000US-0215984P
                    19-MAY-2000; 2000US-0205761P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUL-2001; 2001WO-US021306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22-APR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 89.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 GGCGGGCAG 10
                                                                                                            Koshy B,
                                                                                                                                                      WPI; 2002-083075/11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200202580-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDN2 gene
                                                                                                            Kazemi A,
ð
```

Gaps

.; 0

```
Claim 19; Page 13; 84pp; English
                                                                                                      WO200194376-A1
                                                                                                  Homo sapiens
                                                                                     23-SEP-2002
                                                                                                          13-DEC-2001
                                                                                 ABQ88691;
                                                        Query Match
                                                                         RESULT 494
                                                           Matches
                                                                           ABQ88691,
g
                                                               ò
```

The present invention describes a zinc finger protein (I) that binds to a target site, comprising a first (F1), a second (F2), and a third (F3) conversing a first (F1), a second (F2), and a third (F3) conversing (I), F2, F3 from N-terminus to C-terminus, where the carget site comprises, in 3'-5' direction, a first (S1), a second (S2), and a third (S3) target subsite. Also described are: (I) a polypeptide (II) comprising (I); (2) a polynucleotide (III) encoding (I) or (II); and (S1) described selecting the F1 zinc finger such that it binds to the S1 target subsite, selecting the F2 zinc finger such that it binds to the S2 target subsite, and selecting the F3 zinc finger such that it binds to the S3 target subsite, thus designing (I) that binds to a target site. (I) is useful for recognition of triplet target subsites (L) a starget subsite, thus designing (I) that binds to a target site. (I) is useful in studying gene function, and for human therapeutic methods to modulate the expression of a target region within a subject, in diagnostic methods for sequence specific detection of target nucleic acid can a sample, and in assays to determined the phenotype and function of can assays to determined the phenotype and function of carget sequences, as well as enhanced biological activity. AB071213 to their invention are given in the exemplification of the present invention in the exemplification of the present ö Novel genetic variants of human cofilin 1, CFL1 gene for studying expression, function of the gene and expressing CFL1 protein useful in identifying drugs to treat immunological disorders. Gaps second and third zinc fingers, ordered from N- to C-terminus. Human, cofilin 1, CFL1, gene therapy, antisense gene therapy, immunological disorder; primer extension, PCR; primer; probe; ss. .; 0 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; tive 0; Mismatches 1; Indels Sausker EA; Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other; Human CFL1 primer extension oligonucleotide #14. Koshy B, Example 1; Page 47; 81pp; English. Anastasio AE, Duda A, Kliem SE, ABQ88691 standard; DNA; 10 BP. (GENA-) GENAISSANCE PHARM INC. 11-JUN-2001; 2001WO-US018815. 09-JUN-2000; 2000US-0210884P. (first entry) Local Similarity 88. 15 σ WPI; 2002-566437/60. 7 GCGGCATCG

```
The invention relates to a novel polymucleotide sequence which is a polymorphic variant of a reference sequence for the cofilin 1 (nonmandel) (CFL1) gene or its fragment, or a polymorphic variant of a treference sequence for a CFL1 CDNA or its fragment. The polymucleotide of the invention may have a use in gene therapy, and in antisense gene therapy. The polymucleotide is useful for studying the expression and function of CFL1 and expressing CFL1 protein for use in screening for candidate drugs to treat diseases related to CFL1 activity. The polymorphism and haplotype data are useful for validating whether CFL1 is a suitable target for drugs to treat immunological disorders, screening for such drugs and reducing bias in clinical trials of such drugs. The present sequence represents one of a set of primer extension oligionucleotide PCR primers used in the invention to detect polymorphisms
                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention provides the protein, gene and cDNA sequences of human P450 (cytochrome) oxidoreductase POR, and single nucleotide polymorphisms (SNPs) identified therein. The sequences can be used to haplotype the POK gene of an individual, and to establish whether POR is a suitable target for drugs to treat cancer and disorders associated with impaired protein synthesis in cells. The present sequence is an allele specific primer extension oligonucleotide for the coding sequences of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New genetic variants comprising haplotypes of the P450 (cytochrome) oxidoreductase (POR) isogene, useful in improving the efficiency of drug screening protocols for compounds targeting POR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human P450(cytochrome) oxidoreductase ASO primer extension oligo #40.
                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; P450(cytochrome) oxidoreductase; POR; cancer; haplotype; SNP;
single nucleotide polymorphism; flavoprotein; enzyme;
primer extension oligonucleotide; ss.
                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tanguay DA
                                                                                                                                                                                                                                                                                             Sequence 10 BP; 1 A; 7 C; 1 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Messer C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 16; Page 15; 141pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lanz EM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABN80652 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-OCT-2001; 2001WO-US030877.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-SEP-2000; 2000US-0236449P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 88.9'
                                                                                                                                                                                                                                                                                                                                                                                                           5 GGCGGCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GGGCGGGAT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kazemi A, Kliem SE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2002-394236/42.
                                                                                                                                                                                                                                                         in the CFL1 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200226768-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-APR-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABN80652;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABN80652/
       $$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                           셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ઠે
```

Seguence 10 BP; 1 A; 3 C; 4 G; 2 T; 0 U; 0 Other;

......

ABN87961;

RESULT 496

ઠે g

```
Human activated Th1 and Th2 cell expression gene group, useful for the diagnosis and treatment of Th1 and Th2-related diseases.
                                                                                                                                                                                                                                                                                       SAGE tag; serial analysis of gene expression; human; Th2 cell; activated T cell; T lymphocyte; immune response; expression pattern;
                                                                                                                                                                                                                                                   Human ribosomal protein L35 SAGE tag, SEQ ID NO:72.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 10; Page 9; 60pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABV78320 standard; cDNA; 10 BP.
                                                                                                                       ABV78361 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-DEC-2000; 2000JP-00385816.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-DEC-2000; 2000JP-00385816.
                                                                                                                                                                                                        29-NOV-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17
                       10 GCTGGCGGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-594261/64.
                                                                                                                                                                                                                                                                                                                                  immune disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       250255525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10 GCCGGCGGC
                                                                                                                                                                                                                                                                                                                                                                                                                   JP2002186482-A.
                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-JUL-2002.
                                                                                                                                                                  ABV78361;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABV78320;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ო
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABV78320/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                        ABV78361
                                                                                     RESULT
                                                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes genetic variants of the human glutathione reductase (GSR) gene (I). (I) has antianaemic activity and can be used in gene therapy. (I) can be used in screening for drugs targeting (I) that are useful for treating haemolytic anaemia. Methods from the present invention can be used: for improving the efficiency and reliability of several steps in the discovery and development of drugs for treating diseases associated with GSR activity; for haplotyping, which is also used by the pharmaceutical research scientist to validate GSR as a candidate target for treating a specific condition or disease predicted to be associated with GSR activity, e.g. haemolyric anaemia, and in the design of clinical trials for treating a specific condition of disease associated with GSR activity, and for screening compounds targeting GSR.

(I) is useful in studying the expression and function of GSR, and in expressing GSR protein for use in screening for candidate drugs to treat diseases related to GSR activity. (I) is also useful in studying the capterial and the biological activity of GSR activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the binding affinity of candidate drugs targeting GSR for the treatment of haemolytic anaemia. The present sequence represents a preferred oligonuclectide detection primer for the human GSR gene, which is given in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New genetic variants of Glutathione reductase isogenes, useful for improving efficiency and reliability in drug development for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                          Human GSR preferred oligonucleotide detection primer SEQ ID NO:80.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                ;
0
                                                                                                                                                                                                                                                                                                                                                                                                        enzyme; haemolytic anaemia;
ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 46.3%; Score 7.4; DB 1; Length 10; Best Local Similarity 88.9%; Pred. No. 2.8e+02; Matches 8; Conservative 0; Mismatches 1; Indels
                   Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10 BP; 1 A; 6 C; 3 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sun X;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sausker EA,
                                                                                                                                                                                                                                                                                                                                                                                                                   Human; glutathione reductase; GSR;
gene therapy; antianaemic; primer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 16; Page 15; 137pp; English.
                                                                                                                                                                                                                                                 ABN87961 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-NOV-2001; 2001WO-US046473.
                       46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-NOV-2000; 2000US-0247202P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sanchis A,
                                                                                                                                                                                                                                                                                                                                (first entry)
Ouery Match
Best Local Similarity 88.5
Thea 8. Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 GCGGCGGC 11
                                                                                                      6 GGCGGCATC 14
                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2002-471719/50.
                                                                                                                                            10 GGCCGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hemolytic anemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200242320-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bieglecki KM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ното варіепв.
                                                                                                                                                                                                                                                                                                                                  12-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAY-2002
```

```
ô
The invention relates to SAGE (serial analysis of gene expression) tags representing groups of genes which are expressed in activated human Th1 and/or Th2 cells. The SAGE tags of this invention consist of a sequence of 10 nucleotides located downstream of the 5'-CATG-3' sequence motif lying nearest to the polya region of cDNAs derived from a variety of genes. These tags serve to uniquely identify each transcript and can thus be used to analyse the pattern of gene expression in particular cell types. The invention also relates to proteins encoded by the genes expressed in Th1 and/or Th2 cells, antibodies against these proteins, and inhibitors of the expression of groups of genes that are expressed in minibitors of the expression of groups of genes that are expressed in
                                                                                                                                                                                                                                                                                                                                                                                                               either or both the two cell types. Groups of genes expressed in Thi and/or Th2 cell types may be used for the diagnosts and treatment of Th1 and Th2-related disorders. Sequences ABV7810-ABV78389 are SAGE tags representing 50 genes which are most highly expressed in Th2 cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SAGE tag; serial analysis of gene expression; human; Th1 cell;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.88+02; ative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human ribosomal protein L35 SAGE tag, SEQ ID NO:31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               # X E X E X E X E X E
```

ò

```
WPI; 2002-631294/68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABV84871;
                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 500
                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABV84871
    원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                         The invention relates to SAGE (serial analysis of gene expression) tags
representing groups of genes which are expressed in activated human Thi
and/or Th2 cells. The SAGE tags of this invention consist of a sequence
of 10 nucleotides located downstream of the 5'-CATG-3' sequence motif
lying nearest to the polyA region of CDNAs derived from a variety of
genes. These tags serve to uniquely identify each transcript and can thus
types. The invention also relates to proteins encoded by the genes
cexpressed in Th1 and/or Th2 cells, antibodies against these proteins, and
inhibitors of the expression of groups of genes that are expressed in
cither or both the two cell types. Groups of genes expressed in Th1
and/or Th2 cells, antibodies against these proteins,
and/or Th2 cell types may be used for the diagnosis and treatment of Th1
and/or Th2 cell types which are most highly expressed in Th1 cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SAGE tag; serial analysis of gene expression; human; chronic hepatitis C; CH; liver tissue; hepatocellular carcinoma; cancer; tumour; HCC;
                                                                                                                                                                                        Human activated Th1 and Th2 cell expression gene group, useful for the diagnosis and treatment of Th1 and Th2-related diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
activated T cell; T lymphocyte; immune response; expression pattern; immune disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                       46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human ribosomal protein L35 SAGE tag #656.
                                                                                                                                            (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN.
                                                                                                                                                                                                                        Claim 1; Page 8; 60pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABV84846 standard; cDNA; 10 BP.
                                                                                                 19-DEC-2000; 2000JP-00385816
                                                                                                                      19-DEC-2000; 2000JP-00385816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19-JAN-2001; 2001JP-00012328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JAN-2001; 2001JP-00012328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-DEC-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              expression pattern; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GCGGGCGC 11
                                                                                                                                                                   WPI; 2002-594261/64.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10 GCCGGCGGC
                                                      JP2002186482-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JP2002209591-A.
                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                            02-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABV84846;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABV84846
ઠે
```

```
The invention relates to SAGE (serial analysis of gene expression) tags
representing groups of genes which are differentially expressed in human
chronic hepatitis C (CH) liver tissue or hepatitis C-induced
chronic hepatitis C (CH) liver tissue or hepatitis C-induced
chronic advantance of HCC) compared with normal human liver tissue.

The SAGE tags of this invention consist of a sequence of 10 nucleotides
concated downstream of the 5'-CATG-3' sequence motif lying nearest to the
polyA region of cDNAs derived from a variety of genes. These tags serve
to uniquely identify each transcript and can thus be used to analyse the
polyA region of cDNAs derived from a variety of genes. These tags serve
to uniquely identify each transcript and can thus be used to analyse the
pattern of gene expression in particular cell types. The invention also
relates to proteins encoded by the genes expressed in chronic
liver tissue or HCC, antibodies against these proteins, and inhibitors of
the expression of groups of genes that are overexpressed in chronic
hepatitis C liver tissue or HCC. Groups of genes differentially expressed
to choric hepatitis C tissue or HCC. Groups of their expression
cractwity, and antibodies against the gene products may be used in the
development of drugs to treat chronic hepatitis C and/or HCC. Sequences
ABV84791-ABV84890 are SAGE tags repersenting 100 genes which are highly
expressed in chronic hepatitis C liver tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SAGE tag; serial analysis of gene expression; human; chronic hepatitis C; CH; liver tissue; hepatocellular carcinoma; cancer; tumour; HCC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to SAGE (serial analysis of gene expression) tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human chronic hepatitis C tissue highly expressed gene SAGE tag #681
Human chronic hepatitis C tissue expression exasperating gene group comprises 100 high-ranking genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human chronic hepatitis C tissue expression exasperating gene group comprises 100 high-ranking genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match 46.3%; Score 7.4; DB 1; Length 10; Local Similarity 88.9%; Pred. No. 2.8e+02; es 8; Conservative 0; Mismatches 1; Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (KAGA-) KAGAKU GIJUTSU SHINKO JIGYODAN
                                                                                                                                        Claim 55; Page 29; 139pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 55; Page 29; 139pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABV84871 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-JAN-2001; 2001JP-00012328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-JAN-2001; 2001JP-00012328.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expression pattern; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 GCCGCCGC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2002-631294/68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JP2002209591-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30-JUL-2002.
```

chronic hepatitis C (CH) liver tissue or hepatitis C-induced hepatitis C (CH) liver tissue or hepatitis C-induced hepatitis C (CH) liver tissue or hepatitis C-induced hepatocellular carcinoma (HCC) compared with normal human liver tissue. The SAGE tags of this invention consist of a sequence of 10 nuclectides located downstream of the 5'-CATG-3' sequence motif lying nearest to the polyA region of cDNAs derived from a variety of genes. These tags serve to uniquely identify each transcript and can thus be used to analyse the pattern of gene expression in particular cell types. The invention also relates to proteins encoded by the genes expressed in chronic hepatitis C liver tissue or HCC, antibodies against these proteins, and inhibitors of the expression of groups of genes that are overexpressed in chronic hepatitis C tissue or HCC may be used for the diagnosis and readment of these diseases. Such genes, inhibitors of their expression or activity, and antibodies against the gene products may be used in the development of drugs to treat chronic hepatitis C and/or HCC. Sequences ABV84791-ABV84890 are SAGE tags representing 100 genes which are highly expressed in chronic hepatitis C liver tissue ö monoamine; Gaps Human, solute carrier family 18 member 2; SLC18A2; vesicular monoan vesicular monoamine transporter; VMAT2; polymorphic site; SNP; sengle nucleotide polymorphism; antiinflammatory; neuroleptic; haplotyping; genotyphing; respiratory inflammatory disease; neuropsychiatric disorder; monoaminergic brain system; primer; ss. ; 0 Human SLC18A2 preferred oligonucleotide primer SEQ ID NO:76. 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels Sequence 10 BP; 1 A; 4 C; 5 G; 0 T; 0 U; 0 Other; Sausker EA; Kliem SE, ABL52028 standard; DNA; 10 BP. (GENA-) GENAISSANCE PHARM INC. 17-SEP-2001; 2001WO-US042217. 15-SEP-2000; 2000US-0232895P. (first entry) Query Match
Best Local Similarity 88. Han J, CGACGGGCG 10 σ 1 CGGCGGGCG WO200222652-A2. Anastasio AE, Homo sapiens 11-JUL-2002 21-MAR-2002 ABL52028; RESULT 501 ABL52028/ 셤 ð

The present invention describes an isolated polynucleotide (I) having a sequence (S1) comprising soluble carrier family 18 (vesicular monoamine), member 2 (SLC18A2) isogene selected from 49 isogenes with regions of a sequence (SS) of 40023 bp (see ABL51954), and defined by a corresponding set of polymorphisms whose locations and identities are given in the

Novel genetic variants of soluble carrier family 18 (vesicular monoamine), member 2 gene useful for screening drugs to treat diseases e.g. neuropsychiatric disorders involving monoaminergic brain systems.

WPI; 2002-393942/42.

Claim 19; Page 15; 183pp; English.

```
ö
specification; or a sequence (S2) complementary to (S1). (I) has antiinflammatory and neuroleptic activities, and can be used in gene therapy. Methods from the present invention can be used for haplotyping and genotyping the SLC18A2 gene in an individual. SLC18A2 is also known as the vestcular monoamine transporter (WMAT2). (I) is useful in studying the expression and function of SLC18A2, and in expressing the SLC18A2 protein for use in screening for candidate drugs to treat diseases related to SLC18A2 activity and in studying the effect of the variation on the biological activity of SLC18A2 as well as on the binding affinity of candidate drugs targeting SLC18A2 for the treatment of respiratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a polynucleotide comprising a first nucleotide sequence (NS1) comprising a 116 (interleukin-6, an inflammatory cytokine) isogene selected from isogenes 1-11 and 13-18 given in the specification, where each isogene comprises the regions of NS1 and is further defined by the corresponding sequence of polymorphisms whose locations and
                                                                                                                                                                                                          inflammatory diseases such as neuropsychiatric disorders involving monoaminergic brain systems. The present sequence represents a preferred oligonucleotide primer for human SLC18A2, which is given in the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genetic variants of interleukin-6 isogenes for improving efficiency and reliability in drug development for treating myeloma, coronary artery
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; ss; primer; interleukin-6; IL6; myeloma; arthritis; CAD; Kaposi sarcoma; coronary artery disease; inflammatory cytokine; hypercalcaemia; bone disease; inflammatory disease; HIV; PCR; human immunodeficiency virus infection; stunted growth; isogene; systemic onedeficiency vorus infection; stunted growth; isogene; systemic one ijvenile chronic arthritis; haplotype; genotype; chromosome 7p21-p15; gene therapy; primer extension; SNP; single nucleotide polymorphism.
                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lachowicz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human interleukin 6 primer extension primer 3' terminus #8.
                                                                                                                                                                                                                                                                                                                                                         46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Denton RR,
                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 1 A; 5 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chew A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disease, arthritis and Kaposi sarcoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bentivegna SC, Bieglecki KM, Chew A,
Nandabalan K, Parks KE, Sausker EA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 17; Page 16; 86pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-NOV-2001; 2001WO-US047077.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-NOV-2000; 2000US-0247578P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-AUG-2001; 2001US-0313963P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABK96613 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                  8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-519290/55.
                                                                                                                                                                                                                                                                                                                                                                                                                                           1 CGGCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCCCGGCG
                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200238586-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-MAY-2002.
                                                                                                                                                                                                                                                                               invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABK96613;
                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 50
ABK96613/
        888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
```

```
identities are defined in the specification (PS2-PS6, PS8 and PS10-PS17), or a second nucleotide sequence (NS2) complementary to NS1.

Alternatively, the sequence comprises a coding sequence for an ILG isogene. Also included are methods of halplotyping/ genotyping (and predicting the haplotype/genotype) of the ILG gene of an individual, capacity pair of the ILG gene, an isolated oligonucleotide for detecting a polymorphism in the ILG gene, an isolated oligonucleotide for detecting a polymorphism in the ILG gene, an isolated oligonucleotide, an isolated of transfermed or transfected with the ILG polymorphisms (III) comprising at least 10 and containing one of the identified single-nucleotide polymorphisms (SNP), an isolated correspond to the ILG isogene comprising at least 10 and containing one of the identified single-nucleotide polymorphisms (SNP), an isolated monoclonal antibody specific for the ILG gene, and a genome anthology for the ILG gene. The ILG gene, and a genome anthology for the ILG gene. The ILG computer system for storing and analysing polymorphism data for the ILG gene, and a genome anthology for the ILG gene. The ILG care useful for treating myeloma, coronary artery disease (CAD), architis, Kaposi sarcoma (associated with human immunodeficiency virus infection, HIV), hypercalcementa, bone disease, inflammatory disease, stunted growth and systemic onset juvenile chronic arthritis. The methods are useful for improving the efficiency and reliability in the discovery and development of furus and in the validation of ILG as a drug target. The antibody is useful in diagnostic, promorpriced and the promorprice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The antibody is useful in diagnostic, prognostic and therapeutic methods. The Li6 isogene is useful in studying the expression and function of IL6, and in expression IL6 protein for use in screening for candidate drugs. The gene for Li6 is located on chromosome 7021-p15. The present sequence is the 3' terminus of an allele specific primer used to detect an IL6 polymorphism using the method of primer extension
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New small inducible cytokine subfamily B (Cys-X-Cys), Member 14 (SCYB14) gene polymorphic variants, for studying the expression and function of SCYB14 and screening candidate drugs for treating disorders involving
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human SCYB14 preferred oligonucleotide detection primer SEQ ID NO:29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; small inducible cytokine subfamily B member 14; SCYB14; SNP; single_nucleotide polymorphism; polymorphic; platelet aggregation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 2 A; 3 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sausker EA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Russo DP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABN88030 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antiinflammatory; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-OCT-2001; 2001WO-US031303.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-OCT-2000; 2000US-0238101P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 88.5
nes 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-315864/35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kazemi A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200229108-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-APR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABN88030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best
                 ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Property of the state of the st
```

出来が ス・フィー

```
The present invention describes genetic variants of the human small inducible cytokine subfamily B (Cyg-X-Cyg), Member 14 (BRAK) (SCYB14) gene. SCYB14 sequences have antiinflammatory activity. The polymorphic variants are useful in studying the expression and function of SCYB14, in expression and function of SCYB14, in expression and function of SCYB14, in expression and function of SCYB14 in expression and function of SCYB14 in expression and function of SCYB14 in expression and function of the cartation on the biological activity of SCYB14, and the binding affinity of candidate drugs targeting SCYB14 for the treatment of disorders involving inflammatory responses. Haplotyping methods from the present involving inflammatory responses. Haplotyping methods from the present involving inflammatory responses. Baplotyping methods from the present involving a specific condition or disease predicted to be associated with SCYB14 activity, or in the design of clinical trials of candidate drugs for treating a specific condition or disease associated with SCYB14 activity, Transgenic animals are useful for studying expression of the SCYB14 isogenes in vivo, for in vivo screening and testing of drugs targeted against SCYB14 protein, and for testing the efficacy of therapeutic agents and compounds for disorders related to platelet against an abiological system. The present sequence represents a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New small inducible cytokine subfamily B (Cys-X-Cys), Member 14 (SCYB14)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene polymorphic variants, for studying the expression and function of SCYB14 and screening candidate drugs for treating disorders involving
                                                                                                                                                                                                                                                                                                                                                                                                                                                              aggregation in a biological system. The present sequence represents a preferred oligonucleotide detection primer for the human SCYB14 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human SCYB14 preferred oligonucleotide detection primer SEQ ID NO:31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; small inducible cytokine subfamily B member 14; SCYB14; SNP; single nucleotide polymorphism; polymorphic; platelet aggregation; antiinflammatory; primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention describes genetic variants of the human small
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 0 A; 6 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sausker EA;
                                        Claim 17; Page 14; 73pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 17; Page 14; 73pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Russo DP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABN88032 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-OCT-2001; 2001WO-US031303.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-OCT-2000; 2000US-0238101P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 88.9
Matches 8, Conservative
inflammatory responses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inflammatory responses.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 GCGGGCGCC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 GCGGGCGAC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kazemi A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-315864/35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200229108-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-APR-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABN88032;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Choi JY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABN88032
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
```

conducible cytokine subfamily B (Cys-X-Cys), Member 14 (BRAK) (SCYB14)
gene. SCYB14 sequences have antinflammatory activity. The polymorphic
variants are useful in studying the expression and function of SCYB14, in
expressing SCYB14 protein for use in screening for candidate drugs to
treat diseases related to SCYB14 activity in studying the effect of the
variation on the biological activity of SCYB14, and the binding affinity
of candidate drugs targeting SCYB14 for the treatment of disorders
involving inflammatory responses. Haplotyping methods from the present
involving inflammatory responses. Haplotyping methods from the present
treating a specific condition or disease associated with
SCYB14 activity, or in the design of clinical trials of candidate drugs
cor treating a specific condition or disease associated with SCYB14
cotrivity. Transgenic animals are useful for studying expression of the
SCYB14 isogenes in vivo, for in vivo screening and testing of drugs
therapeutic agents and compounds for disorders related to platelet
captefarred oligonucleotide detection primer for the human SCYB14 gene cancer; Cyclin D1 promoter; CD40L promoter; hepatitis B virus promoter;
HBV promoter; vancomycin-resistant enterococci promoter; VBE promoter;
vanh promoter; androgen receptor promoter; AP promoter;
human epidermal growth factor receptor 2 promoter; her? promoter;
beta lactamase promoter; Bla promoter; transgene; cancer; oclon cancer; immunological disorder; prostate cancer; cytostatic;
autoimmune disease; HBV pres promoter; HBV-X promoter;
Enterococcus infection; immunosuppressive; antibacterial; antiviral;
gene expression modulator; multiple sclerosis; MS;
chronic hepatic insufficiency; cirrhosis; hepatocellular carcinoma;
systematic lupus erythematosus; SLE; graft-vs-host disease; GWH);
familial adenomatous polyposis; rheumatoid arthritis; PCR; primer; Gaps Sheppard LT; ö 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; Vancomycin-resistant enterococci, VanH promoter mutant M5. ME, Michelotti EF; Indels Kongpachith A, 1; Sequence 10 BP; 1 A; 7 C; 2 G; 0 T; 0 U; 0 Other; 0; Mismatches Laurance Tam AW, Laurance r DR, Thomas RL, (GENE-) GENELABS TECHNOLOGIES INC. ABK30047 standard; DNA; 10 BP. 06-JUN-2001; 2001WO-US018343. 06-JUN-2000; 2000US-0209549P (first entry) Query Match
Best Local Similarity 88.9
Matches 8, Conservative Latour DR, mutant; transgenic; ds 2 GGCGGGCGG 10 10 GGCGGGCTG 2 WPI; 2002-130595/17 Bruice TW; Starr DB, Enterococcus sp WO200194600-A2. Velligan MD, Lim MY, Bruic 23-APR-2002 13-DEC-2001 ABK30047; Kim JP, RESULT 505 g ઠે

New nucleic acid regulatory sequences, which are able to regulate

ö

a cyclin D1 promoter, a GD40 promoter, nucleus actuaristication described an insulator and comparator (RR) promoter. Human epidermal growth factor receptor 2 (HER2) promoter, or a beta lactamase conditions and promoter, androgen receptor (RR) promoter. Human epidermal growth factor receptor 2 (HER2) promoter, or a beta lactamase (Bla) promoter. Transcripton requiates may be used to comparate and promoter, and may be incorporated into perably linked to the promoter, and may be incorporated into cherchologous nucleic acid constructs for use in regulated expression of transgenes. Regulated expression of cyclin D1 can be used in cancer therapies, such as breast, colon or pancreatic cancers and familial adenomatous polyposis. Regulation of the activity of CD40 gene promoter may be used in the treatment of immunological disorders, such as autoimmune diseases e.g. multiple sclerosis (MS), systematic lupus erythematosus (SLE), graft-vs-host disease (GVHD) and rheumatoid arthritis. Regulated expression of genes under the control of the HBV (hepatitis B)-specific core, pre-S and X promoters can be used in the therapy of HBV disease, chronic hepatic insufficiency, cirrhosis, hepatic-linguistic genes. Regulated expression of the vahl gene promoter can be used in treatment of Enterococcus infection, while regulated expression of the androgen receptor gene can be used in the treatment of prostate cancer. This sequence represents a mutated promoter region used in the invention to determine the regulatory regions involved in gene in the regulatory regions involved in gene in the control of the invention. ö expression of a gene operably linked to a promoter, useful for regulating the expression of transgenes and for treating e.g., cancer and immunological diseases. Human; ss; lysosomal acid phosphatase 2; ACP2; gene; chromosome 11; lysosome-specific enzyme; orthophosphoric monoester hydrolysis; Hodgkin's disease; HD; acid phosphatase deficiency; novel polymorphic site; ACP2 haplotype; ACP2 genotype; polymorphism; transgenic animal; primer, probe; primer-extension oligonucleotide; SNP; single nucleotide polymorphism. invention describes an isolated nucleic acid regulatory sequence for Human lysosomal acid phosphatase 2 primer-extension oligonucleotide 5. Gaps ; 0 Length 10; 1; Indels Sequence 10 BP; 1 A; 3 C; 6 G; 0 T; 0 U; 0 Other; Score 7.4; DB 1; Pred. No. 2.8e+02; Mismatches Example 4; Page 50; 95pp; English. Tanguay DA; . 0 ABL36369/c ID ABL36369 standard; DNA; 10 BP. (GENA-) GENAISSANCE PHARM INC. 46.3%; 07-JUN-2001; 2001WO-US018457. 07-JUN-2000; 2000US-0210047P. (first entry) Local Similarity 88.9 nes 8; Conservative 10 0 Messer C, 9909999999 1 GGCGCGCGG WO200194362-A2. Homo sapiens. 22-APR-2002 13-DEC-2001. Kliem SE, ABL36369; Query Match RESULT 506 Matches ઠે 원

```
27-SEP-2002 (first entry)
                                                                                              Local Similarity 88.9
Les 8; Conservative
                                                                                                      2 GGCGGGCGG 10
                                                                                                            GGTGGGCGG 1
                                                                                 oligonucleotides
                                                                                                                                                                  WO200251857-A1.
                                                                                                                                                            Homo sapiens
                                                                                                                                                                       04-JUL-2002
                                                                                                                               AAL48132;
                                                                                            Query Match
                                                                                                                                                                                             Chew A,
                                                                                              Best Loca
Matches
                                                                                                                    RESULT
δ
                                                                                                           g
```

```
GGCGGGAGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                          2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2002-566671/60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Denton RR,
                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200251857-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    04-JUL-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAL48135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chew A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 508
                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAL48135
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                     The invention comprises the human lysosomal acid phosphatase 2 (ACP2)

CC nucleic acid and protein sequences. Specifically, the invention relates

CC to the discovery of 22 novel polymorphic sites within the APC2 gene. The

invention also comprises methods for haplotyping and genotyping the ACP2

Gene in an individual. The ACP2 gene (located on chromosome 11) encodes a

CC gene in an individual. The ACP2 gene (located on chromosome 11) encodes a

CC gene in an individual in the Catalyses the hydrolysis of

CC orthophosphoric monoesters to alcohol and phosphate. The ACP2 gene and

CC discase (HD) and acid phosphatase deficiency. The novel ACP2 gene

CC discase (HD) and acid phosphatase deficiency. The novel ACP2 gene.

CC discase (HD) and acid phosphatase deficiency. The novel ACP2 gene.

CC drugs) for treating an ACP2-related disease or condition (e.g. Hodgkin's

CC drugs) for treating an ACP2-related disease or condition (e.g. Hodgkin's

Cd disease and acid phosphatase deficiency). The ACP2 gene polymorphisms are

CC drugs) for treating an ACP2-related disease or condition (e.g. Hodgkin's

CC tests and therapeutic treatments. The ACP2 gene polymorphisms are

CC tests and therapeutic treatments. The ACP2 protein and nucleic acids of

CC tests and therapeutic freatments. The ACP2 protein and nucleic acids of

CC tests and therapeutic protein. The ACP2 nucleic acids of the invention are

CC useful in the production of allele-specific probes. Mucleic acids ABI36321

CC represent claimed ACP2 allele-specific probes. Nucleic acids ABI36321

CC ABI36364 represent claimed ACP2 allele-specific probes.

CC acids ABI36364-ABI36408 represent claimed ACP2 primers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human, neuropeptide Y; NPY; isogene; SNP; atherosclerosis; obesity;
psychological disorder; single nucleotide polymorphism; alcoholism;
antiarteriosclerotic; anorectic; PCR; primer extension oligonucleotide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                Novel genetic variants of acid phosphatase 2, lysosomal polypeptide useful in studying expression and function of the protein, and for screening drugs to treat diseases e.g. Hodgkin's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Denton RR, Lanz EM, Nandabalan K, Stephens JC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human neuropeptide Y primer extension oligo SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10 BP; 1 A; 8 C; 1 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                     Claim 19; Page 15; 109pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAL48132 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (GENA-) GENAISSANCE PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-DEC-2000; 2000WO-US034758.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-DEC-2000; 2000WO-US034758.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2002-566671/60
```

```
ö
                                                                                                                                                                                                                                            The present invention provides the human neuropeptide Y (NPY) gene and single nucleotide polymorphisms (SNPs) identified therein. The sequence can be used in the treatment of disorders associated with NPY, including atheroselorosis, obesity, psychological disorders and alcoholism. The present sequence is an allale specific primer extension oligonucleotide used to isolate the human NPY coding sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention provides the human neuropeptide Y (NPY) gene and single nucleotide polymorphisms (SNPs) identified therein. The sequence can be used in the treatment of disorders associated with NPY, including atherosclerosis, obesity, psychological disorders and alcoholism. The present sequence is an allake specific primer extension oligonucleotide used to isolate the human NPY coding sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human, neuropeptide Y; NPY; isogene; SNP; atherosclerosis; obesity; psychological disorder; single nucleotide polymorphism; alcoholism; antiarteriosclerotic; anorectic; PCR; primer extension oligonucleotide;
New genetic variants of the human Neuropeptide Y (NPY) gene useful for treating disorders affected by abnormal expression or function of NPY isogene e.g., atherosclerosis or obesity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New genetic variants of the human Neuropeptide Y (NPY) gene useful for treating disorders affected by abnormal expression or function of NPY isogene e.g., atherosclerosis or obesity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gape
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             h 46.3%; Score 7.4; DB 1; Length 10; Similarity 88.9%; Pred. No. 2.8e+02; 8; Conservative 0; Mismatches 1; Indele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human neuropeptide Y primer extension oligo SEQ ID NO: 59.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stephens JC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 7.4; DB 1; Length 10; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10 BP; 1 A; 1 C; 8 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 1 A; 1 C; 8 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lanz EM, Nandabalan K,
                                                                                                                                                                  Disclosure; Page 17; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure, Page 17; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-DEC-2000; 2000WO-US034758.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-DEC-2000; 2000WO-US034758.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAL48135 standard; DNA; 10
```

```
The invention relates to an isolated polynucleotide comprising a sequence selected from a polymorphic variant of calmodulin 1 (CALMI). The polymorphic variant comprises an CALMI isogene defined by a haplotype selected from haplotypes 1-21 given in the specification. The polymorphisms are useful for studying this protein for the treatment of a disorder related to its abnormal expression or function of CALMI as polymorphic variants may also be used in screening for compounds targeting CALMI to treat a specific condition or disease predicted to be associated with CALMI activity. Betablishing CALMI haplotype or haplotype pair of an individual is useful for improving the efficiency and celiability of several stepps in the discovery and development of drugs for treating diseases associated with SCYMA activity, e.g. Alzheimer's disease and diseases involving defects in calcium-dependent signal transduction. Haplotyping the CALMI gene in an individual is also useful in the design of clinical trials of candidate drugs for treating a specific condition on these predicted to be associated with CALMI and in the design of clinical trials of candidate drugs for treating a specific condition on the design of candidate drugs for treating a since the calmidate drugs for treating and activity of specific condition on a disease predicted to be associated with CALMI
  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New calmodulin-1 (CALM-1) isogene polymorphic variants, useful in expressing CALM1 protein for use in screening for candidate drugs to treat diseases related to CALM1 activity such as Alzheimer's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  represent human CALM1 allele- specific
                                                                                                                                                                                                                                                                                                                                           Calmodulin 1; CALM1; human; single nucleotide polymorphism; SNP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stephens JC;
  Indels
                                                                                                                                                                                                                                                                                                                                                              haplotyping; SCYA3; Alzheimer's disease; drug screening; calcium-dependent signal transduction; PCR primer; ss.
                                                                                                                                                                                                                                                                                                    Human CALM1 gene allele-specific oligonucleotide #95.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     oligonucleotides and PCR primers of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10 BP; 0 A; 6 C; 3 G; 1 T; 0 U; 0 Other;
  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Koshy B,
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Choi JY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 17; Page 14; 82pp; English.
ö
                                                                                                                                                                             AAS95986 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GENA-) GENAISSANCE PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-APR-2001; 2001WO-US011509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L2-APR-2000; 2000US-0196340P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAS95892-AAS96018
                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8; Conservative
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chew A,
                                   2 GGCGGGCGG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3 GCGGGCGGC 11
                                                                         σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2002-049190/06.
                                                                             1 GGCGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200179218-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bentivegna SC,
                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
                                                                                                                                                                                                                                                            26-FEB-2002
.,
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-OCT-2001
                                                                                                                                                                                                                      AAS95986;
                                                                                                                                     RESULT 509
Matches
                                                                                                                                                                                                                    ð
                                       à
                                                                           셤
```

10 GCGGGAGGC 2

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes a library comprising polypeptides. Each polypeptide comprises a first or second zinc finger domain. The domains of each polypeptide are identical to a zinc finger domain from a naturally occurring protein and either do not occur in the same naturally occurring protein or occur in the same naturally occurring protein or occur in the same naturally occurring protein in a different configuration than in the polypeptide. The domains vary among polypeptides. Also described: (1) producing chimeric nucleic acids; (2) generating an artificial zinc finger polypeptide that specifically binds to a target DNA site; and (3) identifying a nucleic acid encoding a zinc finger polypeptide that specifically recognises a target DNA site. The library can be used for producing chimeric nucleic acids. ACC41551 to ACC41758 and ABR40919 to ABR41015 represent nucleotide and amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New library comprising polypeptides having zinc finger domains, useful for producing chimeric nucleic acids.
                                                                                                Zinc finger protein DNA-binding domain target sequence SEQ ID NO:210.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                               Zinc finger domain; zinc finger; zinc finger binding domain; probe; chimeric nucleic acid; library; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic acid amplification, nucleic acid analysis, DNA analysis, s
RNA analysis, RAPD; PCR; primer; random amplified polymorphic DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acid PCR amplification method-related RAPD PCR primer #65.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequences given in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                   Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10 BP; 1 A; 1 C; 7 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                    Hwang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 Ryu E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 40; Page 101; 234pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                   Kwon Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
ACC41663 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46.3%;
                                                                                                                                                                                                                                                                                  17-AUG-2002; 2002WO-KR001560.
                                                                                                                                                                                                                                                                                                                  17-AUG-2001; 2001US-0313402P.
22-APR-2002; 2002US-0374355P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABT14295 standard; DNA; 10
                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                   X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |||||||
GGGCGGGAT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13
                                                                                                                                                                                                                                                                                                                                                                                                   Park
                                                                                                                                                                                                                                                                                                                                                                    (TOOL-) TOOLGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2003-268344/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5 GGGCGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                  WO2003016571-A1.
                                                                                                                                                                                                                                                                                                                                                                                                   Bae K,
                                                                 21-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-FEB-2003
                                                                                                                                                                                                                                                   27-FEB-2003.
                                                                                                                                                                                   Synthetic.
                                ACC41663;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABT14295;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                   Kim J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 511
ABT14295/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
 ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZZXEXEXEX
ZXXXXXX
```

Hamill

```
Designing zinc finger protein that has three zinc fingers from N-terminus and C-terminus that bind to subsites in 3' to 5' direction, in a target site, by selecting zinc fingers that bind their respective subsites.
                                                                                                                                                                                                                         The invention relates to a method of designing a zinc finger protein. The method is useful for designing a zinc finger protein. The method provides multi-finger zinc finger proteins with improved affinity and specificity for their target sequences, as well as enhanced biological activity. The present sequence represents a zinc finger protein DNA target sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention describes a method for preparing an insoluble fusion protein comprising a heparin-binding protein (HBP), a cleavage site and a second polypeptide, in recombinant bacterial cells by obtaining a precipitate comprising the fusion protein in the insoluble fraction of a host cell lysate. Also described: (1) producing a recombinant HBP in bacterial cells; (2) a DNA construct comprising a DNA sequence encoding HBP, which is fused in frame to a DNA sequence encoding a protease cleavage site, which in turn is fused in frame to a DNA sequence encoding a second polypeptide; (3) a recombinant expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           insoluble fusion protein; heparin-binding protein; HBP; antibacterial; bacterial disease; linker; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Preparing a fusion protein comprising a heparin-binding protein, a cleavage site and a second polypeptide in recombinant bacterial cells comprises obtaining a precipitate having the fusion protein in the fraction of a host cell lysace.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                     46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Heparin-binding protein related linker SEQ ID NO:26.
                                                                                                                                                                                                                                                                                                                                                             Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 3; SEQ ID NO 26; 64pp; English.
                                                                                                                                                                                    Disclosure; Page 18; 34pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-MAR-2003; 2003WO-DK000207.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-MAR-2002; 2002DK-00000477.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADE11568 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7 GCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (LEUK-) LEUKOTECH AS
                                                           WPI; 2003-567233/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2003-876904/81.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCGCCGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2003080660-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Woeldike HF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADE11568;
                      Liu O;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADE11568
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention comprises a method for the PCR amplification of nucleic acids. The method involves a set of primers, where two of the primers are in solution and at least two other primers are attached to a solid support. The method of the invention can be used for the analysis of a nucleic acid or a mixture of nucleic acids, including: single-stranded DNA molecules, double-stranded DNA molecules and mRNA molecules. The present DNA sequence represents a random amplified polymorphic DNA (RAPD)
                                                                                                                                                                                                                                                                                                                                                  Amplification of nucleotide sequences from polynucleotides by chain extension of oligonucleotide primers, comprises 2 oligonucleotides in solution, 2 attached to supports and both share complementary sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ds, target sequence; zinc finger protein;
multi-finger zinc finger protein; improved affinity;
improved specificity; enhanced biological activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 3 A; 3 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%; Score 7.4; DB 1;
88.9%; Pred. No. 2.8e+02;
live 0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Zinc finger target sequence DNA #335.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Fig 17; 60pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADA63313 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   990S-0126238P.
990S-0126239P.
990S-0146595P.
990S-0146615P.
20000S-00535008.
                                                                                                                                      28-MAR-2002; 2002WO-GB001489
                                                                                                                                                                                02-APR-2001; 2001GB-00008182.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-NOV-2001; 2001US-00990186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      primer of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-NOV-2003 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 88.9
hes 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6 GGCGCCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                           WPI; 2003-075484/07.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2003068675-A1.
                                                    WO200281743-A2.
                                                                                                                                                                                                                       (HAMI/) HAMILL
             Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-MAR-1999;
24-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-JUL-1999,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (FING/) FIN
                                                                                              17-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
```

Query Match

ğ

Best Loc Matches

ò

ADA63313;

7×7×8×8×8×8×8×8×8×8×8×8×8×8×8

512

ADA63313

:

ö damaged pre-auricular skin and sun-protected post-auricular skin as well as sun-protected epidermis. The method involces: using at least one marker of photodamage comprising one of 15 fully defined sequences (S1-15) as given in the specification; and detecting a change in the marker to determine the presence of photodamage. The method is useful for detecting photodamage, aging, dry skin or oily skin. This sequence represents a SAGE sequence tag used as a marker for detecting photodamage vector including the DNA construct of (2); and (4) a fusion protein comprising an amino acid sequence of HBP, an amino acid sequence of a second polypeptide and an amino acid sequence of a protease cleavage site, the amino acid sequence of the protease cleavage site, the amino acid sequence of the protease cleavage site being positioned between the amino acid sequences of HBP and the second polypeptide, where the second polypeptide provides the fusion protein with capabilities of forming insoluble aggregates in cytoplasm of bacteria after being expressed in the bacteria. HBP has antibacterial activity. The method is useful for producing an insoluble fusion protein. The fusion protein is useful for producing an HBP which may be used for preparing a medicament. The medicament may be used for treating mammals having a bacterial disease state. The present sequence represents a linker oligonucleotide which is used in the exemplification of the personal care method; photodamage; Serial Analysis of Gene Expression; SAGE; sun-damage; pre-auricular skin; sun-protected post-auricular; sun-protected epidermis; aging; dry skin; oily skin; photodamage marker; The invention describes a personal care method of detecting photodamage comprising comparative Serial Analysis of Gene Expression (SAGE) of sun-Personal care method for detecting photodamage, aging, dry or oily skin comprises detecting gene markers upregulated in pre-auricular skin. Gaps ö Match 46.3%; Score 7.4; DB 1; Length 10; Local Similarity 88.9%; Pred. No. 2.8e+02; es 8; Conservative 0; Mismatches 1; Indels Sequence 10 BP; 1 A; 6 C; 3 G; 0 T; 0 U; 0 Other; (UNIL) UNILEVER HOME & PERSONAL CARE USA DIV CO Photodamage detection method related DNA #142. Urschitz J; Iobst ST, Schilling KM, Boyd C, Example 2; Page 12; 25pp; English. ADH75124 standard; DNA; 10 BP. 08-NOV-2001; 2001US-0338272P. 07-OCT-2002; 2002US-00266138 (first entry) 6 9 CGGCGGGTG 1 WPI; 2003-635999/60. 1 ceeceeece present invention. US2003152964-A1. Homo sapiens 22-APR-2004 14-AUG-2003 ADH75124; Query Match in skin, Best Loca Matches RESULT 514 ADH75124, g 888888888888888888 ð

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention describes a personal care method of detecting photodamage comprising comparative Serial Analysis of Gene Expression (SAGE) of sundamaged pre-auricular skin and sun-protected post-auricular skin as well as sun-protected epidermis. The method involces: using at least one marker of photodamage comprising one of 15 fully defined sequences (S1-15) as given in the specification; and detecting a change in the marker to determine the presence of photodamage. The method is useful for detecting photodamage, aging dry skin or oily skin. This sequence represents a SAGE sequence tag used as a marker for detecting photodamage
                                                                                                                                                                                                                                                                                                                      personal care method; photodamage; Serial Analysis of Gene Expression; SAGE; sun-damage; pre-auricular skin; sun-protected post-auricular; sun-protected epidermis; aging; dry skin; oily skin; photodamage marker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Personal care method for detecting photodamage, aging, dry or oily skin comprises detecting gene markers upregulated in pre-auricular skin.
                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                           ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; Live 0; Mismatches 1; Indels
                           Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UNIL ) UNILEVER HOME & PERSONAL CARE USA DIV CO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Iobst ST, Schilling KM, Boyd C, Urschitz J;
                                                                                                                                                                                                                                                                                           Photodamage detection method related DNA #37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 2; Page 8; 25pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BP.
                                                                                                                                                                                                  BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-NOV-2001; 2001US-0338272P.
                             46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-OCT-2002; 2002US-00266138.
                                                                                                                                                                                                  ADH75019 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADH75069 standard; DNA; 10
                                                                                                                                                                                                                                                              (first entry)
                                                           8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                          3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ~
                                                                                                                       ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2003-635999/60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  255255525
                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                  US2003152964-A1.
                                                                                                                                                                                                                                                            22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14-AUG-2003.
                                                                                                                        10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                                                               ADH75019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 516
ADH75069/c
ID ADH750
XX
                                                                                                                                                                     RESULT 515
ADH75019/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                       Ношо
                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                    ò
                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ò
```

```
Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or ubiquinone.
                                                                                                                                                                                                                                                                                                                                The invention relates to a new isolated nucleic acid which comprises rchd005, rchd024, rchd032, rchd036, rchd502, rchd523, rhd528, or rchd534 genes. The nucleic acids are useful for treating and diagnosing cardiovascular diseases, such as atherosclerosis, ischaemia/reperfusion, hypertension, restenosis and arterial inflammation. The genes identified may be used diagnostically or as targets for therapeutic intervention. The present sequence represents a differential display primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; antisense; lung dysfunction, nasal airway dysfunction; antiinflammatory; steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds.
                                                                                                                                                                                                                                 New fingerprint genes useful for treating and diagnosing cardiovascular diseases, e.g. atherosclerosis, ischemia/reperfusion, or hypertension.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human adenosine Al receptor antisense fragment no.714.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 10 BP; 3 A; 3 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Katz E,
                                                                                                                                                                                                                                                                                           Disclosure; SEQ ID NO 18; 93pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABZ94851 standard; DNA; 10 BP.
      05-OCT-2001; 2001US-00970820.
                                               95US-00386844.
                                                                                                           (MILL-) MILLENNIUM PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-APR-2002; 2002WO-US013135.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-APR-2001; 2001US-0286137P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 88.5
                                                                                                                                                  Falb DA, Gimbrone MA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N
                                                                                                                                                                                           WPI; 2003-370721/35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2003-229219/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10 GGCTGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200285308-A2
                                             10-FEB-1995;
22-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nyce JW, I
Miller S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABZ94851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best
      셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention describes a personal care method of detecting photodamage Comprising comparative Serial Analysis of Gene Expression (SAGE) of sundamaged pre-auricular skin as well as sun-protected post-auricular skin as well as sun-protected epidermis. The method involces: using at least one marker of photodamage comprising one of 15 fully defined sequences (S1-15) as given in the specification; and detecting a change in the marker to determine the presence of photodamage. The method is useful for detecting photodamage, aging, dry skin or oily skin. This sequence
                                                                                                                                           SAGE; sun-damage; pre-auricular skin; sun-protected post-auricular;
sun-protected epidermis; aging; dry skin; oily skin; photodamage marker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88; PCR; primer; human; cardiovascular disease; atherosclerosis; ischaemia; reperfusion; hypertension; restenosis; arterial inflammation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Personal care method for detecting photodamage, aging, dry or oily skin comprises detecting gene markers upregulated in pre-auricular skin.
                                                                                                                          photodamage; Serial Analysis of Gene Expression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IL-1 activated HUVEC differential display primer #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                   (UNIL ) UNILEVER HOME & PERSONAL CARE USA DIV CO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Urschitz J;
                                                                                 Photodamage detection method related DNA #87.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 2; Page 10; 25pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Boyd C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADI10077 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.3%;
                                                                                                                                                                                                                                                                                                                                                   07-OCT-2002; 2002US-00266138
                                                                                                                                                                                                                                                                                                                                                                                          08-NOV-2001; 2001US-0338272P
                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Iobst ST, Schilling KM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8; Conservative
                                                                                                                          care method;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-635999/60.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                    US2003152964-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US2002170077-A1.
                                                                                                                                                                                                                             Homo sapiens
                                        22-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-APR-2004
                                                                                                                                                                                                                                                                                                             14-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-NOV-2002
ADH75069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
```

Gaps ö

1; Indels

Aguilar

ADI10077;

Query Match

Best Loc Matches

셤

ð

skin.

first active agent comprising an oligomerclectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an entilnflammatory steroid and ubiquinone. A composition of the invention has antilnflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a cuse in antisense gene therapy. The composition is useful for treating or preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an antiinflammatory steroid in a subject, for reducing levels of, or reducing sensitivity to adenosine, reducing levels of adenosine or increasing levels of ubiquinone or increasing levels of ubiquinone or increasing levels of ubiquinone or increasing levels of uniquinone or increasing levels of upiquinone or increasing upiquinone or incre ö Pharmaceutical composition for treating ailments associated with impaired respiration, has oligo(s) antisense to specific gene(s) or its corresponding RNAs, and glucocorticoid or non-glucocorticoid steroid or ubiquinone. lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO antinflammatory steroid; ubiquinone; antiinflammatory; antiallergic; antiasthmatic; hypotensive; immunosuppressive; cytostatic; gene therapy; antisense gene therapy; respiratory; lung; adenosine sensitivity; adenosine receptor; bronchodilation; bronchoconstriction; lung allergy; lung inflammation; respiratory disease; ds. The invention relates to a novel pharmaceutical composition, which has a Gaps Aquilar D; ö antisense; lung dysfunction; nasal airway dysfunction; Length 10; 1; Indels Human adenosine Al receptor antisense fragment no.825. Pabalan J, Sequence 10 BP; 1 A; 1 C; 7 G; 1 T; 0 U; 0 Other; Score 7.4; DB 1; Pred. No. 2.8e+02; Disclosure; SEQ ID NO 10093; 872pp; English ftp.wipo.int/pub/published_pct_sequences 0; Mismatches Katz E, Sandrasagra A, Ka J, Shahabuddin S; ABZ94962 standard; DNA; 10 BP. 46.3%; 88.9%; 24-APR-2001; 2001US-0286137P. 23-APR-2002; 2002WO-US013135. (EPIG-) EPIGENESIS PHARM INC (first entry) 8; Conservative 2 GGCGGGCGG 10 2 GGAGGCCGG 10 WPI; 2003-229219/22. Li Y, Sar Tang L, Query Match Best Local Similarity WO200285308-A2. Homo sapiens. 17-0CT-2003 31-OCT-2002 Nyce JW, I Miller S, ABZ94962; Human; RESULT 519 Matches 셤

antiinflammatory steroid in a subject, for reducing or depleting levels of, or reducing sensitivity to adenosine, reducing levels of adenosine receptor, producing bronchodilation, increasing levels of ubiquinone or lung surfactant in a subject's tissue, or treating bronchoconstriction, lung inflammation, lung allergies, or a respiratory disease or condition. Note: The sequence data for this patent is not represented in the printed specification, but was obtained in electronic format directly from WIPO junctions of genes encoding a polypeptide associated with lung and/or nasal airway dysfunction and a second active agent comprising an antinflammatory steroid and ubiquinone. A composition of the invention has antiinflammatory, antiallergic, antiasthmatic, hypotensive, immunosuppressive, and cytostatic activity. The composition may have a use in antisense gene therapy. The composition may have a preventing a respiratory, lung or malignant disease or condition, also for enhancing the prophylactic or therapeutic respiratory effect of an zinc finger protein; triplet target subsite; zinc finger motif; sp-1; ds. which has a The invention relates to a novel pharmaceutical composition, which has first active agent comprising an oligomoclectide antisense to the initiation codon, coding region, 5' or 3' end genomic flanking regions, 5' and 3' intron-exon junctions, or regions within 2-10 nucleotides of Gaps New zinc finger protein used for recognizing triplet target subsites having nucleotide G in 5'-most position of subsite, that has been optimized with respect to location of subsite within target site. ö 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; 1; Indels Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other; Synthetic zinc finger protein target DNA #335. Disclosure; SEQ ID NO 10204; 872pp; English. at ftp.wipo.int/pub/published_pct_sequences 0; Mismatches Example 6; SEQ ID NO 1284; 48pp; English 99US-0126239P. 99US-0146595P. 99US-0146615P. 2000US-00535008. 20-NOV-2001; 2001US-00989994. 99US-0126238P 20-NOV-2000; 2000US-00716637 ADM21517 standard; DNA; 10 20-MAY-2004 (first entry) 8; Conservative 7 GCGGCATCG 15 1 GCGGCATGG 9 WPI; 2003-843091/78 Local Similarity US2003104526-A1. Unidentified 30-JUL-1999; 24-MAR-1999; 24-MAR-1999; 05-JUN-2003. (FIDO/) FID 30-JUL-1999 23-MAR-2000 ADM21517; Query Match Liu O; RESULT 520 Matches ADM2151 ઠ 원

S

ö

Gaps ;

1; Indels

```
The invention describes a new zinc finger protein that binds to a target site comprising a first (F1), a second (F2) or a third (F3) zinc finger, ordered F1. F2 and F3 from N-terminus to C-terminus. The target site comprises, in the 3' to 5' direction, first (F1), second (S2) and third (S3) target subsites. The zinc finger proteins can be used for eccognising trippet target subsites having the nucleotide G in the 5'-most position of the subsite, that has been optimised with respect to the location of the subsite within the target site. This sequence represents the target polynucleotide of a synthetic zinc finger protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New microarray for measuring gene expression characteristics of hematopoietic cells, useful for preparing a composition for diagnosing or treating myeloid leukemia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention describes a microarray for measuring gene expression characteristics of haematopoietic cells comprising at least 5 polymucleotides having distinct sequences. Also described are: a method of diagnosing or treating an abnormality associated with haematopoiesis, and diagnosing myeloid leukaemia in a patient. The microarray is useful for preparing a composition for diagnosing or treating myeloid leukaemia. This sequence represents a polymucleotide probe comprising a portion of an expressed gene isolated from a population of CDI5+ myeloid cells and suitable for use in the microarray of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cytostatic; gene therapy; microarray; gene expression characteristic; haematopoietic cell; haematopoiesis; myeloid leukaemia; probe; CD15+ myeloid cell; ss.
                                                                                                                                                                                                                                         46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred, No. 2.8e+02; ative 0; Mismatches 1; Indels
                                                                                                                                                                                                         Sequence 10 BP; 0 A; 3 C; 6 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rowley JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CD15+ myeloid cell associated probe segid 129.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; SEQ ID NO 129; 32pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhou G,
                                                                                                                                                                                                                                                                                                                                                                                                                                        ADL96231 standard; DNA; 10 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-DEC-2001; 2001US-0343826P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23-DEC-2002; 2002US-00329465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chen J,
                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                              GCGGCATCG 15
                                                                                                                                                                                                                                                                                                                                                   1 GCGGCGTCG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-863699/80.
                                                                                                                                                                                                                                                           Local Similarity
Les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ROWLEY J D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WANG S M.
LEE S.
CHEN J.
ZHOU G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lee S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US2003165949-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-SEP-2003
                                                                                                                                                                            invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADL96231;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wang SM,
                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (WANG/)
(LEES/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ROWL/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHEN/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZHOU/
                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 521
                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                       ADL96231
$$33333333333$$
                                                                                                                                                                                                                                                                                                                  ઠે
                                                                                                                                                                                                                                                                                                                                               셤
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates a method to the detection of photodamage comprising using a marker of photodamage and detecting a change in the marker to determine the presence of photodamage. The marker is a nucleic acid having cDNA sequence of 11 or 10 base pairs. Detection is done by comparing a first skin sample with a second skin sample to determine a change in a marker. The method is used for detecting a skin condition, e.g. photodamage, aging and drying. The method provides an easy way to track expression of even small numbers of genes in laboratory models or in human tissue. The present sequence represents a photodamage marker used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Detection of skin conditions e.g. photodamage, aging and drying, comprises using polynucleotide sequences in gene arrays as markers, and detecting a change in the markers.
                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                             Score 7.4; DB 1; Length 10; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
Sequence 10 BP; 1 A; 4 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       છ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Urschitz J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UNIL ) UNILEVER HOME & PERSONAL CARE USA DIV
                                                                                                                                                                                                                                                                                                 ss; photodamage; skin; aging; drying; human.
                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Boyd C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 2; Page 10; 21pp; English.
                                                                                                                                                                                   ADM77084 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADM77139 standard; cDNA; 10 BP.
                             46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                               07-OCT-2002; 2002US-00265509
                                                                                                                                                                                                                                                                                                                                                                                                                                          08-NOV-2001; 2001US-0337856P
                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Schilling KM,
                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 88.5
                                                                                                                                                                                                                                                                        Photodamage marker #91
                                                                                                              10
                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 GCGGGCGCC 11
                                      Similarity
8; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-830613/77.
                                                                                                               CGACGGGCG
                                                                                   50555555
                                                                                                                                                                                                                                                                                                                                                         US2003170739-A1.
                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                         03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                     11-SEP-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Iobst ST,
                                                                                                                                                                                                               ADM77084;
                           Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADM77139
                                                                                                                                                        RESULT 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 523
ADM77139/c
                                                                                                            셤
                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ਨੇ
```

```
WO200285309-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                  29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31-OCT-2002.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nyce JW, |
Miller S,
          Iobst ST,
                                                                                                                                                                                                                                                                           m
                                                                                                                                                                                                                                                                                                                                                                ABD18810;
                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                  ABD18810
                                                                                                                                                                                                                                                                                                                         RESULT
ઢ
                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                       The invention relates a method to the detection of photodamage comprising using a marker of photodamage and detecting a change in the marker to determine the presence of photodamage. The marker is a nucleic acid having cDNA sequence of 11 or 10 base pairs. Detection is done by comparing a first skin sample with a second skin sample to determine a change in a marker. The method is used for detecting a skin condition, e.g. photodamage, aging and drying. The method provides an easy way to track expression of even small numbers of genes in laboratory models or in human tissue. The present sequence represents a photodamage marker used in the method of the invention.
                                                                                                                                                                                                               Detection of skin conditions e.g. photodamage, aging and drying, comprises using polynucleotide sequences in gene arrays as markers, and detecting a change in the markers.
                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                     46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                       UNIL ) UNILEVER HOME & PERSONAL CARE USA DIV CO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UNIL ) UNILEVER HOME & PERSONAL CARE USA DIV CO.
                                                                                                                                                                           Urschitz J;
                                     se; photodamage; skin; aging; drying; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          вв; photodamage; skin; aging; drying; human.
                                                                                                                                                                                                                                                     Example 2; Page 12; 21pp; English.
                                                                                                                                                                           Boyd C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADM77030 standard; cDNA; 10 BP.
                                                                                                                                     08-NOV-2001; 2001US-0337856P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-OCT-2002; 2002US-00265509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-NOV-2001; 2001US-0337856P
                                                                                                                  07-OCT-2002; 2002US-00265509
03-JUN-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                           Schilling KM,
                                                                                                                                                                                                                                                                                                                                                                                                                        8; Conservative
                  Photodamage marker #146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Photodamage marker #37
                                                                                                                                                                                                                                                                                                                                                                                                                                             3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 GCCGGCGC 2
                                                                                                                                                                                             WPI; 2003-830613/77.
                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                          US2003170739-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US2003170739-A1
                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                              11-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-SEP-2003
                                                                                                                                                                          Iobst ST,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADM77030:
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 524
                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ò
```

```
The invention relates a method to the detection of photodamage comprising using a marker of photodamage and detecting a change in the marker to determine the presence of photodamage. The marker is a nucleic acid having cDNA sequence of 11 or 10 base pairs. Detection is done by comparing a first skin sample with a second skin sample to determine a change in a marker. The method is used for detecting a skin condition, e.g. photodamage, aging and drying. The method provides an easy way to track expression of even small numbers of genes in laboratory models or in human tissue. The present sequence represents a photodamage marker used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antialergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; respiratory distress syndrome; allergic rhinitis; pulmonary hypertension; emphysema; chronic obstructive pulmonary disease; cancer; bronchitis;
                                                                                                                                               Detection of skin conditions e.g. photodamage, aging and drying, comprises using polynucleotide sequences in gene arrays as markers, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pharmaccutical composition for treating asthma, has antisense oligonuclectide containing less percentage of adenosine, targeted tnucleic acids associated with lung airway or lung dysfunction, and bronchodilating agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aguilar D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              46.3%; Score 7.4; DB 1; Length 10;
88.9%; Pred. No. 2.8e+02;
tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human adenosine Al receptor oligonucleotide fragment 825.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pabalan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
   Urschitz J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Katz E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pulmonary transplantation rejection; ds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Li Y, Sandrasagra A, Ka
Tang L, Shahabuddin S;
                                                                                                                                                                                                                          detecting a change in the markers.
   ပဲ
                                                                                                                                                                                                                                                                                      Example 2; Page 8; 21pp; English
   Boyd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ВЪ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23-APR-2002; 2002WO-US013143.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-APR-2001; 2001US-0286036P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (EPIG-) EPIGENESIS PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABD18810 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
Schilling KM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2003-093058/08.
                                                                       WPI; 2003-830613/77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10 GCCGGCGC
```

ä

Wed May 10 10:49:51 2006

```
This invention describes a noves composition is a rist active agent, comprising oligomucleotides, effective for alleviating critication, respiratory tract inflammation, allergies and bronchoconstriction, respiratory tract inflammation, allergies and creducing adenosine eansitivity, levels of adenosine (A) or (A) receptors, cateducing adenosine earsitivity, levels of adenosine (A) or (A) receptors, curfactant depletion or hyposecretion, when administered to a mammal. The oligomucleotides are derived from a gene encoding or regulating cypression of a target polypeptide associated with lung airway or lung dysfunction also describes a kit, that comprises: (a) adelivery or lung device, in separate containers, (b) the oligomucleotides, (c) fer invention as antiallergic, antiinflammatory, antiasthmatic, of the invention has antiallergic, antiinflammatory, antiasthmatic, analgesic, hypotensive, immunosuppressive and cytostatic activity, is a beta-adrenergic agonist. The composition is useful for preventing or treating a respiratory, lung or malignant disease. The administered composition comprises oligo and is administered to reduce the production or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The pulmonary obstruction, and/or bronchoconstriction and/or lung inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary disease, pulmonary condition such as pulmonary disease, pulmonary condition such as pulmonary disease, pulmonary infection, bulmonary infection, bulmonary infection, bulmonary infection, bulmonary interest characterial the pracet in the target RNA serves to prevent the broadcase.

The reduced adenosine content of the enti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the broadcast in the paraget RNA serves to prevent the broadcast in the paraget RNA serves to prevent or prevent in the paraget RNA serves to prevent in the par
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; antisense; bronchoconstriction; allergy; hyposecretion; pain; respiratory tract inflammation; adenosine sensitivity; lung; cancer; surfactant depletion; antiallergic; antiinflammatory; antiasthmatic; analgesic; hypotensive; immunosuppressive; cytostatic; cystic fibrosis; beta-adrenergic agonist; respiratory disease; pulmonary vasoconstriction; emphysema; chronic obstructive pulmonary disease; bronchitis; pulmonary transplantation rejection; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the oligonucleotides into products that free adenosine into the system e.g., lung, brain, heart, kidney, etc, tissue environment and thereby, to prevent any unwanted effects due to it
                                                                             invention describes a novel composition (a) a first active agent,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human adenosine Al receptor oligonucleotide fragment 714.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other;
                      Claim 15; SEQ ID NO 10204; 763pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABD18699 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-APR-2002; 2002WO-US013143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24-APR-2001; 2001US-0286036P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 88.5
Les 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7 GCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GCGGCATGG 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200285309-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABD18699;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABD18699
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

Title linus interaction describes a moves comperising oligonucleotides, effective for alleviating become comperising oligonucleotides, effective for alleviating bronchoconstriction, respiratory tract inflammation, allergies and bronchoconstriction, respiratory tract inflammation, allergies and bronchoconstriction or hyposecretion, when administered to a mammal. The surfactant depletion or hyposecretion, when administered to a mammal. The oligonucleotides are derived from a gene encoding or regulating of a target polypeptide associated with lung airway or lung dysfunction or cancer and can be anti-sense to the corresponding mRNA. The invention also describes a kit, that comprises: (a) a delivery of instructions for adding a carrier and for use of the kit. The composition of the invention has antiallergic, antiinflammatory, antiastmatic, of the invention has antiallergic, antiinflammatory, antiastmatic, of treating a respiratory, immunosuppressive and cytostatic activity, is a composition capacity or composition is useful for preventing or treating a respiratory, lung or mailgnant disease. The administered composition or availability, or to increase the degradation of the target mRNA or to reduce the amount of target polypeptide present in the lungs. The composition and/or lung pulmonary observations. inflammation, allergies and/or surfactant hypoproduction are associated with a disease or condition such as pulmonary vasoconstriction, inflammation, allergies, asthma, impeded respiration, respiratory distress syndrome, pain, cystic fibrosis, allergic rhinitis, pulmonary hypertension, emphysema, chronic obstructive pulmonary disease, pulmonary transplantation rejection, pulmonary infections, bronchitis or cancer. The reduced adenosine content of the anti-sense oligos corresponding to thymidines present in the target RNA serves to prevent the breakdown of t free adenosine into the system tissue environment and thereby, to This invention describes a novel composition (a) a first active agent, Pharmaceutical composition for treating asthma, has antisense oligonucleotide containing less percentage of adenosine, targeted truncleic acids associated with lung airway or lung dysfunction, and Pabalan J, Aguilar 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels Sequence 10 BP; 1 A; 1 C; 7 G; 1 T; 0 U; 0 Other; Claim 15; SEQ ID NO 10093; 763pp; English. Sandrasagra A, Katz E, the oligonucleotides into products that brain, heart, kidney, etc, unwanted effects due to it Human photodamage marker EST 3. ADZ99487 standard; cDNA; 10 BP. (EPIG-) EPIGENESIS PHARM INC. 14-JUL-2005 (first entry) Query Match
Best Local Similarity 86...
8; Conservative bronchodilating agent. 2 GGCGGGCGG 10 2 GGAGGCGG 10 Li Y, Sar Tang L, WPI; 2003-093058/08. lung, brain, prevent any Miller S, ADZ99487; Nyce JW, e.g., RESULT 527 ADZ99487 ð a ö Gaps ö 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ative 0; Mismatches 1; Indels

ö

Gaps

ö

aging; nootropic; dermatological; degeneration; selectable marker; EST;

expressed sequence tag; ss.

JP2003210200-A. Homo sapiens.

Gimbrone MA;

```
WPI; 2004-041208/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
DA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 529
ADH57741/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
Falb
ઠે
                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                       comprising detecting a change in a photodamage marker. Photoaging is an environmentally-induced remodeling of the dermis that arises as a result of repeated exposure of skin to sunlight. It has been suggested that photoaging is the predominant contributing factor to the prematurely-aged appearance of sun-exposed skin. The method of the invention may be useful for detecting photodamage and for comprehensive skin condition studies to elucidate new pathways. The current sequence is that of a human photodamage marker ISC (expressed sequence tag) of the invention which is most abundant in post-auricular skin. The current sequence was identified via comparison of SAGE (serial analysis of gene expression) libraries for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; 88; differential display; cardiovascular disease; interleukin-1; IL-1; shear stress; high fat dist; high cholesterol dist; multiple transmembrane domain receptor target; atherosclerosis; ischeemia; reperfusion; hypertension; restenosis; inflammation; PCR;
                                                                                                                         Personal care method of detecting photodamage, useful for comprehensive study of skin conditions to elucidate new pathways, involves detecting
                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                              The invention relates to a novel method of detecting photodamage
                                                                                                                                                                                                                                                                                                                                                                                              .;
0
                                                                                                                                                                                                                                                                                                                                                                      46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                             1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCR primer for IL-1 induction/differential display OPE7.
                                                                                                                                                                                                                                                                                                                                                 Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                       Example 2; Page 12; 67pp; Japanese.
                                                                                                                                                 change in marker of photodamage.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95US-00386844.
95US-00485573.
96US-00599654.
97US-00944496.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADF91289 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                          pre- and post-auricular skin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MILL-) MILLENNIUM PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-JUL-2002; 2002US-00186950
                                15-OCT-2002; 2002JP-00300615.
                                                       08-NOV-2001; 2001US-0338272P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                              8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                           (UNIL ) UNILEVER LTD.
                                                                                                   WPI; 2003-819839/77.
                                                                                                                                                                                                                                                                                                                                                                                                                                       10 GCCGCCGCC
                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US2003188327-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-FEB-1995;
07-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-FEB-1996,
06-OCT-1997,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-FEB-2004
         29-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             02-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADF91289;
                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                    Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADF91289,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
```

```
The invention relates to an isolated nucleic acid (appearing as ADF91272-
CC ADF91278 and ADF91307 which are up regulated or down regulated
CC (differentially displayed) in individuals genetically predisposed to
CC andiovascular disease. It may be up regulated by treatment with
CC interleukin (IL) 1 or treatment with shear stress. It may be down
CC diet. Also included are a nucleotide vector containing the nucleotide
CC diet. Also included are a nucleotide vector containing the nucleotide
CC diet. Also included are a nucleotide vector containing the nucleotide
CC diet. Also included are a nucleotide vector containing the nucleotide
CC diet. Also included are a nucleotide vector containing the nucleotide
CC diet. Also included are a nucleotide vector containing the nucleotide
CC dispense (comprising a gene or at sevent and includiovascular disease states)
CC dardiovascular disease (comprising administering a compound that
CC andiovascular disease (comprising administering a compound that
CC andiovascular disease (comprising administering the efficacy of a compound in clinical trials for the treatment of cardiovascular disease
CC compound in clinical trials for the treatment of cardiovascular disease
CC compound and activity of multiple transmembrane domain receptor target gene product (comprising a gene or its gene product, which is differentially
CC expressed in cardiovascular disease states), and identifying a compound
CC that modulates the activity of multiple transmembrane domain receptor
CC expressed and activator of the multiple transmembrane domain receptor
CC within the first cell; and comparing the level to that of a second
CC within the first cell; and comparing the level to that of a second
CC within the first from that of the second cell, the cardiovascular disease
CC compound so that if the level of intracellular calcium release within the
CC straget product has been identified). The invention is for use in the
CC cardenial/repertansion, hypertension or restencial a simple and stepid
CC inflammation
Isolated nucleic acid for use in treatment of cardiovascular diseases e.g. atherosclerosis, contains nucleotide of sequences having specified number of base pairs or nucleotide sequence of gene or gene fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88; primer library; extendable oligo, EO; ligation chain reaction; LCR; rolling circle amplification; strand displacement amplification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peutically. It provides a simple and rapid cation of useful therapeutics. The present used to isolate cDNA differentially displayed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Extendable oligo E230 for DNA sequencing and PCR amplification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 3 A; 3 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               diagnostically and therapeutically. It
                                                                                                                                                                                                    Example; SEQ ID NO 18; 130pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         approach to the identification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADH57741 standard; DNA; 10 BP.
                                                                                                                             contained in specified clones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    according to the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              is a PCR primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 GGCGGCATC 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10 GGCTGCATC 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADH57741;
```

ò

```
24-DEC-2002; 2002WO-AU001763.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proehlich AC,
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADJ65134/
    ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                  This invention relates to a novel method for the optimisation of primer libraries. Specifically, it refers to increasing the affinity of short coligonucleotide primers, also known as extendable oligos (BOB), for their template sequences. The present invention describes improved methods for be useful for PCR, RT-PCR, ligation chain reaction of DNA that can amplification, strand displacement amplification and isothermal DNA amplification. Accordingly, these extendable oligos with improved amplification. Accordingly, these extendable oligos with improved from biotechnology and agriculture to medical research. This oligonucleotide sequence is an extendable oligonucleotide that includes an adenine replacement 2,4 diaminopurine nucleotide analogue in the catch region, and is useful for both DNA sequencing reactions and PCR region, and is useful for both DNA sequencing reactions and PCR
                                                                                                                                                                                                                Increasing the affinity of an extendable oligonucleotide (EO) for a target nucleic acid, for providing primers having improved specificity, comprises hybridization of the EO to a template oligonucleotide (TO) and extension of the EO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ss; primer library; extendable oligo; BO; ligation chain reaction; LCR; rolling circle amplification; strand displacement amplification; isothermal DNA amplification; biotechnology; agriculture; medical research; 2,4 diaminopurine nucleotide analogue; PCR; primer.
isothermal DNA amplification, biotechnology, agriculture, medical research; 2,4 diaminopurine nucleotide analogue; PCR; primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Extendable oligo E166 for DNA sequencing and PCR amplification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 10 BP; 0 A; 5 C; 4 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                              Example 9; Page 42; 85pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADHS7677 standard; DNA; 10 BP
                                                                                                    24-DEC-2002; 2002WO-AU001763.
                                                                                                                            01-MAY-2002; 2002AU-00002045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 88.5.
                                                                                                                                                 (NUCL-) NUCLEICS PTY LID.
                                                                                                                                                                         Thomas T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 cecedeace 1
                                                                                                                                                                                                WPI; 2004-053046/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 00000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2003093500-A1.
                                                        WO2003093500-A1
                                                                              13-NOV-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13-NOV-2003
                                                                                                                                                                        Tillett D,
                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADH57677;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4DH57677
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ઠે
```

```
This invention relates to a novel method for the optimisation of primer libraries. Specifically, it refers to increasing the affinity of short oligonucleotide primers, also known as extendable oligos (EOS), for their template sequences. The present invention describes improved methods for sequencing and the linear and exponential amplification of DNA that can be useful for PCR, NF-PCR, ligation chain reaction of EONA that can amplification, strand displacement amplification and isothermal DNA amplification, accordingly, these extendable oligos with improved specificity and affinity are particularly important in fields ranging from biotechnology and agriculture to medical research. This oligonucleotide sequence is an extendable oligonucleotide that includes an adenine replacement 2, diaminopurine mucleotide analogue in the catch region, and is useful for both DNA sequencing reactions and PCR mamplification in an exemplification of the invention.
                                                                                                                                                                                                                                                                                 Increasing the affinity of an extendable oligonucleotide (EO) for a target nucleic acid, for providing primers having improved specificity, comprises hybridization of the EO to a template oligonucleotide (TO) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Light responsive element; frq gene; LRE; imperfect repeat; ds; WC-1; WC-2; white collar complex; flavin adenine dinucleotide; FAD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N. crassa frq gene proximal LRE imperfect repeat #2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 0 A; 6 C; 3 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dunlap JC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 9; Page 41; 85pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP.
01-MAY-2002; 2002AU-00002045.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-AUG-2002; 2002US-00228876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-AUG-2002; 2002US-00228876.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADJ65134 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAY-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 88.5
Les 8, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Loros J,
                                                                                                                                      rillett D, Thomas T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               σ
                                                                       (NUCL-) NUCLEICS PTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 CGCCGGACG 1
                                                                                                                                                                                                              WPI; 2004-053046/05.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (FROE/) FROEHLICH A (LORO/) LOROS J. (DUNL/) DUNLAP J C.
                                                                                                                                                                                                                                                                                                                                                                                                  extension of the EO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 00000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Neurospora crassa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2004038400-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       transactivator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-FEB-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADJ65134;
```

```
Matches
                                                                                                                                                                                                                                                                                                                                                               ADN89076
ઠે
                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                    The invention relates to regulating expression of a gene in a cell comprising contacting a cell containing flavin adenine dinucleotide (FAD) and a gene operatively-linked to a light-responsive regulatory sequence with a white collar (WC)-1/WC-2 transactivator that binds FAD and the light-responsive regulatory sequence. Also included are a light-responsive regulatory sequence (or light responsive element, LRE) appearing as ADJ65134, ADJ65135, and ADJ65136 (LREs from the N. crassa frq gene promoter) and a kit comprising a WC-1/WC-2 transactivator and a light-responsive regulatory sequence. The method and kit are useful for regulating gene expression using light. The present sequence is an LRE (comprising an imperfect repeat) from the Neurospora crassa frq gene promoter which binds the WC-1/WC-2 transactivators.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to antisense oligonucleotides (ADM76030 and ADM76031) targeted to the human NEPHA gene (ADM76029), which encodes a novel brain-derived ephrin receptor (ADM76028). The NEPHA protein has 50.7% homology to the human EphA7 ephrin receptor and its gene is located on chromosome 1. Ephrin receptors are overexpressed in various cancers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel antisense oligonucleotide useful as anticancer agent for preventing cancer e.g. lung cancer, stomach cancer, breast cancer.
                       Regulating expression of a gene in a cell comprises contacting a cell containing FAD and a gene operatively linked to a light-responsive regulatory sequence with a WC-1/WC-2 transactivator.
                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            drug screening; antisense therapy; gene therapy; cancer; tumour; lung cancer; ovarian cancer; breast cancer; cervical cancer; prostate cancer; bladder cancer; stomach cancer; colorectal cancer; cytostatic; transcriptional control region; promoter; transcription site; ds.
                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NEPHA gene transcriptional control region GATA-1 binding site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; NEPHA; ephrin receptor; brain; chromosome 1; apoptosis;
                                                                                                                                                                                                                                                                                                          46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                 Sequence 10 BP; 2 A; 3 C; 3 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                      0; Mismatches
                                                                            Claim 3; SEQ ID NO 2; 21pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 2; Page 26; 38pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADM76272 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-APR-2002; 2002JP-00103497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-APR-2002; 2002JP-00103497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                     Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                               7 GCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-038434/04.
WPI; 2004-203233/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JP2003289876-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-JUN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADM76272;
                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 532
                                                                                                                                                                                                                                                                                                                                                                                          셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
```

ö and it has been found that inhibition of NEPHA expression promotes apoptosis. The invention also relates to the NEPHA transcriptional control (promoter) region (ADM76037); recombinant vectors and host cells comprising the NEPHA promoter operably linked to a reporter gene; a method of screening for compounds which inhibit or activate transcription of the NEPHA gene; and pharmaceutical compositions comprising an antisense oligonucleotides and modulators of NEPHA transcription represent inhibitor or activator. The antisense oligonucleotides and modulators of NEPHA transcription are useful for inducing apoptosis for the treatment and/or prevention of cancers in which NEPHA is overexpressed auto as and cancer, ovarian stomach cancer and colorectal cancer. Sequences ADM76038-ADM76371 represent transcription for transcription for transcription for a force and colorectal cancer. Sequences ADM76038-ADM76371 represent transcription for the property of th A kit comprising a set of oligonucleotides designed for identifying at least one of the alleles at each polymorphic site (PS) in a set of 129 polymorphic sites (PSS) given in the specification, is new. The kit identifies at least one of the alleles at each polymorphic site (PS) in a set of 129 polymorphic sites (PSS) given in the specification, for example: PSI and PS42; PSI9 and PS42; PS3, PSI2, and PS42; a set of polymorphic sites comprising a linked haplotype to any one of haplotypes 101-194, 201-463 or 501-515 given in the specification; or a set of polymorphic sites comprising a substitute haplotype for any one of haplotypes 101-194, 201-463 or haplotypes 501-515 given in the New kit comprising a set of oligonucleotides, useful for determining whether an individual has a statin response marker I or II for preparing a composition for treating hyperlipidemia. Hyperlipidemia treatment associated human ITGB3 haplotype probe #141. Gaps Cappola G; r C, Petersen N; ö ss; probe; antilipemic; gene therapy; allele; polymorphic site; integrin beta 3; ITGB3; statin response marker; hyperlipidemia. 46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; 1; Indels Messer C, Dain BJ, Sequence 10 BP; 1 A; 2 C; 4 G; 3 T; 0 U; 0 Other; Bentivegna SC, Bieglecki KM, Brain CD, Dalu Judson RS, Lachowicz M, Lee HH, Litvyn L, N Pusso DP, Windemuth AK; 0; Mismatches Claim 13; SEQ ID NO 144; 202pp; English. control region of the NEPHA gene. (GENA-) GENAISSANCE PHARM INC. ADN89076 standard; DNA; 10 BP. 09-OCT-2003; 2003WO-US032361. 09-OCT-2002; 2002US-0417743P. (first entry) 8; Conservative 16 6 WPI; 2004-340942/31. 1 CGGGATCGT 8 CGGCATCGT Local Similarity WO2004033710-A2. Homo sapiens. 15-JUL-2004 22-APR-2004. ADN89076; Query Match

corresponds to the relation nucleatide position of each polymorphic site corresponds to the nucleatide position of each polymorphic site corresponds to the relation profile (281) 1911 (182) 1919 (281) 1919 (182) (182) (18

Triggs precided to the selected with Irggs activity; validating the predicted to be secotated with Irggs activity; and an isolated time of predicted to be secotated with Irggs activity; and an isolated time in the integrit. The triggs are at appropriate size (PS) consisting of 851-864, where the oligonucleotide denotating of a blocked one to several manner of a little size of the selected size of size of the oligonucleotide to the selected size of size of the oligonucleotide so that is a located one to several manner of the oligonucleotide so the oligonucleotide ontains of the oligonucleotide of the oligonucleotide ontains of the oligonucleotide of the oligonucleotide ontains of the oligonucleotide ontai

```
ö
determining the copy number in the individual or a haplotype and assigning the individual to the first statin response marker group if the individual has at least one copy of the selected haplotype and to the second statin response marker group if the individual has zero copy of the selected haplotype; and assigning the individual to the first statin response marker group if the individual has zero or one copy of the selected haplotype and to the second statin response marker group if the individual has two copies of the selected haplotype. The determining step comprises genotyping each polymorphic site in a set of polymorphic sites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a method of diagnosis (M1) comprising: (a) providing a test sample of breast tissue; (b) determining the level of expression in the test sample of a gene (e.g. interleukin.8, superoxide dismutase 2 and tubulin, alpha 3) selected from Table 1 given in the specification, and (c) if the gene is expressed in the test sample at a lower level than in a control normal breast tissue sample, diagnosing the test sample as containing cancer cells. The method is used for diagnosing breast cancer. This sequence corresponds to an oligonucleotide primer used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Diagnosing breast cancer comprises determining expression levels of a gene selected from those differentially expressed in normal or cancerous cells of a breast tissue sample including interleukin 1, thrombospondin 1 and cystatin C.
                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ss; primer; cytostatic; RNA interference; RNAi; gene silencing; antisense oligonucleotide inhibitor; cathepsin K inhibitor; cathepsin L inhibitor; cathepsin P inhibitor; metalloprotease 2 inhibitor; thrombospondin-2 antagonist;
                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
46.3%; Score 7.4; DB 1; Length 10;
Best Local Similarity 88.9%; Pred. No. 2.8e+02;
Matches 8; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                              Length 10;
                                                                                                                                                                                                                                                       1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          collagen antagonist; diagnosis; breast tissue; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BP; 1 A; 4 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                              46.3%; Score 7.4; DB 1;
88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Breast cancer detection oligonucleotide #155.
                                                                                                                                                                                                                                                       0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 2; SEQ ID NO 155; 149pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (DAND ) DANA FARBER CANCER INST INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                       ADS76373 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      22-MAR-2004; 2004WO-US008866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-MAR-2003; 2003US-0456735P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                 Local Similarity 88.5
nes 8; Conservative
                                                                                                                                                                                                                                                                                             3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                     2 GCGGGAGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Porter D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2004-728732/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2004085621-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Polyak K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADS76373;
                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                               RESULT 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                      ADS76373
                                                                                                                                                                                                                                                                                                                                                                                                                                                               셤
        88888888888
                                                                                                                                                                                                                                                                                               ò
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a method of diagnosis (M1) comprising: (a) providing a test sample of breast tissue; (b) determining the level of expression in the test sample of a gene (e.g. interleukine, superoxide dismutase 2 and tubulin, alpha 3) selected from Table 1 given in the specification, and (c) if the gene is expressed in the test sample at a lower level than in a control normal breast tissue sample, diagnosing the test sample as containing cancer cells. The method is used for diagnosing breast cancer. This sequence corresponds to an oligonucleotide primer used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Diagnosing breast cancer comprises determining expression levels of a gene selected from those differentially expressed in normal or cancerous cells of a breast tissue sample including interleukin 1, thrombospondin 1 and cystatin C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                            ss; primer; cytostatic; RNA interference; RNA; gene silenci antisense oligomucleotide inhibitor; cathepsin K inhibitor; cathepsin E inhibitor; metalloprotease 2 inhibitor; thrombospondin-2 antagonist; collagen antagonist; diagnosis; breast tissue; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                 Breast cancer detection oligonucleotide #849.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 2; SEQ ID NO 849; 149pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (DAND ) DANA FARBER CANCER INST INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Allinen M;
                                                                                                                                                                                                                                                                                                                                                                                                                        22-MAR-2004; 2004WO-US008866.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-MAR-2003; 2003US-0456735P.
                                                                                                          ADS77067 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA; 10
                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-DEC-2004 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11
σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Porter D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2004-728732/71.
                              CGACGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADS77761 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       255255525
                                                                                                                                                                                                                                                                                                                                                          WO2004085621-A2.
                                                                                                                                                                                                                                                                                                                             Homo sapiens,
                                                                                                                                                                      30-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polyak K,
                                                                                                                                         ADS77067;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADS77761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                           RESULT 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADS77761/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
 ઠ
                         셤
                                                                                                             ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
```

Gaps

;

```
The invention relates to a method of diagnosis (MI) comprising: (a) providing a test sample of breast tissue; (b) determining the level of expression in the test sample of a gene (e.g. interleukin.8, superoxide dismutase 2 and tubulin, alpha 3) selected from Table 1 given in the specification, and (c) if the gene is expressed in the test sample at lower level than in a control normal breast tissue sample, diagnosing the test sample as containing cancer cells. The method is used for diagnosing breast cancer. This sequence corresponds to an oligonucleotide primer used in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                           Diagnosing breast cancer comprises determining expression levels of a gene selected from those differentially expressed in normal or cancerous cells of a breast tissue sample including interleukin 1, thrombospondin 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                               88; primer; cytostatic; RNA interference; RNAi; gene silencing; antisense oligonucleotide inhibitor; cathepsin K inhibitor; cathepsin L inhibitor; cathepsin F inhibitor; metalloprotease 2 inhibitor; thrombospondin-2 antagonist; collagen antagonist; diagnosis; breast tissue; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ss, primer; cytostatic; RNA interference; RNAi; gene silencing; antisense oligonucleotide inhibitor; cathepsin K inhibitor; cathepsin L inhibitor; cathepsin F inhibitor; metalloprotease 2 inhibitor; thrombospondin-2 antagonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        collagen antagonist; diagnosis; breast tissue; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                 cancer detection oligonucleotide #1543.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Breast cancer detection oligonucleotide #547.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 6; SEQ ID NO 1543; 149pp; English.
                                                                                                                                                                                                                                                                                                                        (DAND ) DANA FARBER CANCER INST INC.
                                                                                                                                                                                                                                                                                                                                                           Allinen M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADS76765 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                     22-MAR-2004; 2004WO-US008866.
                                                                                                                                                                                                                                                                                        20-MAR-2003; 2003US-0456735P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8; Conservative
                                                                                                                                                                                                                                                                                                                                                           Polyak K, Porter D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 GCGGGCGGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-728732/71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10 GCCGCCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                    WO2004085621-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO2004085621-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and cystatin C.
                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                     07-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADS76765;
                 Breast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ઠે
```

```
ö
                                                                                                                                                                                                                                                                                 The invention relates to a method of diagnosis (M1) comprising: (a) providing a test sample of breast tissue; (b) determining the level of expression in the test sample of a gene (e.g. interleukin.e, superoxide dismutase 2 and tubulin, alpha 3) selected from Table 1 given in the specification, and (C) if the gene is expressed in the test sample at a lower level than in a control normal breast tissue sample, diagnosing the test sample as containing cancer cells. The method is used for diagnosing breast cancer. This sequence corresponds to an oligonucleotide primer used in the method of the invention.
                                                                                                                                                                     Diagnosing breast cancer comprises determining expression levels of a gene selected from those differentially expressed in normal or cancerous cells of a breast tissue sample including interleukin 1, thrombospondin 1 and cystatin C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Diagnosing breast cancer comprises determining expression levels of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antisense oligonucleotide inhibitor; cathepsin K inhibitor; cathepsin K inhibitor; cathepsin K inhibitor; cathepsin L inhibitor; cathepsin F inhibitor; metalloprotease 2 inhibitor; thrombospondin-2 antagonist; collagen antagonist; diagnosis; breast tissue; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 10 BP; 1 A; 4 C; 5 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Breast cancer detection oligonucleotide #1348.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Mismatches
                                                                                                                                                                                                                                                     Example 2; SEQ ID NO 547; 149pp; English.
                                                                                     (DAND ) DANA FARBER CANCER INST INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (DAND ) DANA FARBER CANCER INST INC.
                                                                                                                   Allinen M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Allinen M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВР.
                             22-MAR-2004; 2004WO-US008866.
                                                         20-MAR-2003; 2003US-0456735P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-MAR-2004; 2004WO-US008866.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-MAR-2003; 2003US-0456735P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADS77566 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 CGACGGGCG 10
                                                                                                                     Porter D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Porter D,
                                                                                                                                                 WPI; 2004-728732/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2004-728732/71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                505550550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2004085621-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-DEC-2004
 07-OCT-2004
                                                                                                                   Polyak K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polyak K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADS77566;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ઠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
```

```
.;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention comprises a method of screening for candidate agents capable of altering the biological activity of a protein encoded by a nucleotide involved in hypoxia-related tumourigenesis. The method of the invention involves: contacting a test agent with a target cell expressing the nucleotide, and monitoring the activity of the expressed protein product; if the test agent modifies the activity of the expressed protein then this is a candidate agent. The method of the invention is useful for modifying hypoxia-induced gene regulation and for diagnosing, prognosing or treating tumours. The present DNA sequence represents a SAGE tag that was used in the exemplification of the invention.
gene selected from those differentially expressed in normal or cancerous cells of a breast tissue sample including interleukin 1, thrombospondin 1 and cystatin C.
                                                                                                                          The invention relates to a method of diagnosis (M1) comprising: (a) providing a test sample of breast tissue; (b) determining the level of expression in the test sample of a gene (e.g. interleukin.e, superoxide dismutase 2 and tubulin, alpha 3) selected from Table 1 given in the specification, and (c) if the gene is expressed in the test sample at a lower level than in a control normal breast tissue sample, diagnosing the test sample as containing corresponds to an oligonucleotide primer breast cancer. This sequence corresponds to an oligonucleotide primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         encoded by a polynucleotide involved in hypoxia-related tumorigenesis comprises contacting an agent with a target cell and monitoring activity of expressed product.
                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Identifying agents that alter biological activity of a polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                  .;
0
                                                                                                                                                                                                                                                                                                                                                     46.3%; Score 7.4; DB 1; Length 10; larity 88.9%; Pred. No. 2.8e+02; Conservative 0; Mismatches 1: Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hypoxia-related tumourigenesis-related SAGE tag #625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          screening; hypoxia-related tumourigenesis;
hypoxia-induced gene regulation; tumour; SAGE tag;
                                                                                                                                                                                                                                                                                                                       Sequence 10 BP; 0 A; 6 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                        Example 6; SEQ ID NO 1348; 149pp; English.
                                                                                                                                                                                                                                                                                      in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 68; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ВЪ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-APR-2003; 2003US-0461712P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-APR-2004; 2004WO-US011087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADU18834 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                        3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10 GCCGCCGC 2
                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GENZ ) GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2004-758333/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2004092198-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-JAN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADU18834;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nacht M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 539
                                                                                                                                                                                                                                                                                      nseq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADU18834
                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ઠે
```

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention comprises a method of screening for candidate agents capable of altering the biological activity of a protein encoded by a nucleotide involved in hypoxia-related tumourigenesis. The method of the invention involves: contacting a test agent with a target cell expressing the nucleotide, and monitoring the activity of the expressed protein product; if the test agent modifies the activity of the expressed protein then this is a candidate agent. The method of the invention is useful for modifying hypoxia-induced gene regulation and for diagnosing, prognosing or treating tumours. The present DNA sequence represents a SAGE tag that was used in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Identifying agents that alter biological activity of a polypeptide encoded by a polymucleotide involved in hypoxia-related tumorigenesis comprises contacting an agent with a target cell and monitoring activity of expressed product.
                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                           .;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ·,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                           Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
                                                         Indels
                                                                                                                                                                                                                                                                                                                            ds
                                                                                                                                                                                                                                                                                   Hypoxia-related tumourigenesis-related SAGE tag #454.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10 BP; 2 A; 2 C; 4 G; 2 T; 0 U; 0 Other;
Sequence 10 BP; 1 A; 3 C; 6 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                               screening; hypoxia-related tumourigenesis; hypoxia-induced gene regulation; tumour; SAGE
                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure; Page 65; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP.
                                                                                                                                                                                             BP.
                             46.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-APR-2004; 2004WO-US011087.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-APR-2003; 2003US-0461712P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.3%;
                                                                                                                                                                                            ADU18663 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADU18279 standard; DNA; 10
                                                                                                                                                                                                                                                     (first entry)
                                                           8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13
                                                                                        7 GCGCCATCG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           σ
                                                                                                                  σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GENZ ) GENZYME CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2004-758333/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                 1 GCGGCAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGCGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGACGCCAT
                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                         WO2004092198-A2
                                                                                                                                                                                                                                                                                                                                                            Unidentified
                                                                                                                                                                                                                                                     13-JAN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                     28-OCT-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
8
                                                                                                                                                                                                                         ADU18663;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nacht M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 541
                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADU18279
ID ADU1
                                                                                                                                                              RESULT 54
ADV18663
                                                                                                                                                                                                          쉱
                                                                                          ŝ
                                                                                                                 셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 à
```

ADU18279;

Nacht M;

```
DNA probe design information-processing method in nucleic acid sequence analysis system, involves extracting probe candidate based on extracted partial base sequence with respect to obtained self/competition frequency
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= a/mod_base= OTHER
/mod_base= OTHER
/note= "OTHER= The 3'-OH of the nucleotide at the 3' end
is protected by an amino group"
                                                                                                                                                                                                                                                                                                           This invention relates to a novel method which involves obtaining self/competition frequency tables (105,106) by counting each appearance number of partial base sequences maintained with respect to self/competition base sequence data (101,103). A probe candidate is derived based on extracted partial base sequence with respect to the obtained frequency tables. The method is useful for processing information of DNB probe design used in nucleic acid sequence analysis system. The method enables exact and reproducible DNA probe design, reliably. The present sequence is that of a DNA sequence which was used in the illustration of the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stabilizing gene amplification reagents, involves utilizing a chimeric oligonucleotide primer for amplifying oligonucleotides and blocking the 3' terminal of the oligonucleotide, such that its expansion does not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA amplification reagent stability-related PCR primer SegID8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 7.4; DB 1; Length 10;
Pred. No. 2.8e+02;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10 BP; 1 A; 3 C; 6 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA amplification; stabilizer; PCR; primer; ss.
                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO 164; 30pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46.3%;
08-MAR-2004; 2004JP-00064494.
                                         02-APR-2003; 2003JP-00099464,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-JUN-2003; 2003JP-00183694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-JUN-2003; 2003JP-00183694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADW28687 standard; DNA; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-APR-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Neisseria gonorrhoeae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ጀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2005-104889/12.
                                                                                                                           WPI; 2004-807907/80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGGCGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TAKI ) TAKARA BIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CGGCGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sest Local Similarity
                                                                                 (CANO ) CANON KK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JP2005013122-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-JAN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADW28687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                  tables.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention comprises a method of screening for candidate agents capable of altering the biological activity of a protein encoded by a nucleotide involved in hypoxia-related tumourigenesis. The method of the invention involves: contacting a test agent with a target cell expressing the nucleotide, and monitoring the activity of the expressed protein product; if the test agent modifies the activity of the expressed protein then this is a candidate agent. The method of the invention is useful for modifying hypoxia-induced gene regulation and for diagnosing, prognosing or treating tumours. The present DNA sequence represents a SAGE tag that was used in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Identifying agents that alter biological activity of a polypeptide encoded by a polynucleotide involved in hypoxia-related tumorigenesis comprises contacting an agent with a target cell and monitoring activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel nucleotide analysis method-related DNA sequence SegID164.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46.3%; Score 7.4; DB 1; Length 10; 88.9%; Pred. No. 2.8e+02; ive 0; Mismatches 1; Indels
                                                                                                                                      screening; hypoxia-related tumourigenesis;
hypoxia-induced gene regulation; tumour; SAGE tag; ds
                                                                                              Hypoxia-related tumourigenesis-related SAGE tag #70.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10 BP; 2 A; 2 C; 4 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 57; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP.
                                                                                                                                                                                                                                                                                                                                 09-APR-2004; 2004WO-US011087
                                                                                                                                                                                                                                                                                                                                                                        09-APR-2003; 2003US-0461712P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     microarray; DNA sequencing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADU40795 standard; DNA; 10
                                                       13-JAN-2005 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 88.5
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5 GGGCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        σ
                                                                                                                                                                                                                                                                                                                                                                                                                (GENZ ) GENZYME CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of expressed product
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2004-758333/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGACGGCAT
                                                                                                                                                                                                                                             WO2004092198-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JP2004318840-A
                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-JAN-2005
                                                                                                                                                                                                                                                                                         28-OCT-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-NOV-2004
```

ADU40795;

X B X B X S X X X B X B X B X Y X D

RESULT 542

ò 셤

ö

Gaps

; 0

```
ö
                                                                                         amplification reagent. The method involves utilizing a chimeric oligonucleotide primer for amplifying an oligonucleotide which is substantially complementary to the primer, where the ratio of Tm value of the primer and the oligonucleotide is 1.2-3.3 and the gene amplification reagent comprises the chimeric oligonucleotide primer, and blocking the occur. The method enables effective and improved stabilization of gene amplification reagents. The present sequence is that of a PCR primer which was used in the exemplification of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to detecting the presence or absence of at least one target nucleic acid sequence in a sample (that further contains a nucleic acid molecule comprising a sequence corresponding to the target nucleic acid molecule comprises contacting the sample with at least one nucleic acid probe that is capable of selectively binding to a continuum of at least a part of the nucleic acid molecule corresponding to the target nucleic acid sequence and a part of the nucleic acid molecule adjacent to the corresponding sequence. Also included are a composition or a kit, used in the method above each comprising at least one nucleic acid probe that is capable of selectively binding to a continuum of at least a part of the nucleic acid molecule corresponding to the target nucleic acid sequence and a part of the nucleic acid molecule adjacent to the corresponding sequence. The method further comprises contacting the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Selective detection of target nucleic acid sequence in a sample comprises contacting the sample with nucleic acid probe.
                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                           This invention relates to a novel method of stabilizing a gene
                                                                                                                                                                                                                                                                                                                              Length 10;
                                                                                                                                                                                                                                                                                                                                                                i; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Universal bacterial 16S rRNA BSR1407/16-based probe.
                                                                                                                                                                                                                                                                                       Sequence 10 BP; 0 A; 3 C; 5 G; 2 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (DAOG-) DANMARKS OG GRONLANDS GEOLOGISKE UNDERSO
                                                                                                                                                                                                                                                                                                                          46.3%; Score 7.4; DB 1;
88.9%; Pred. No. 2.8e+02;
                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                 Example 1; SEQ ID NO 8; 22pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 19; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA detection; 88; rRNA; probe.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADV92177 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUL-2004; 2004WO-DK000480.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-JUL-2003; 2003DK-00001018
03-JUL-2003; 2003US-0484926P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jacobsen CS;
                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGGCGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                      3 GCGGGCGC 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2005-101503/11.
                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO2005003384-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-APR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-JAN-2005.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bender M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADV92177;
                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteria
                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADV92177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                                                                       셤
```

ö to the nucleic acid molecule comprising a sequence corresponding to the target nucleic acid sequence prevents annealing of the extendable primer and/or extension of the primer (i.e. is a blocking probe). The continuum of at least a part of the nucleic acid molecule corresponding to the target nucleic acid sequence and a part of the nucleic acid molecule adjacent to the corresponding sequence comprises a transcription initiation site and its upstream sequence. The method, composition of kit are useful for detecting the presence or absence of at least one target nucleic acid sequence in a sample that further contains a nucleic acid molecule comprising a sequence corresponding to the target nucleic acid sequence is sequence in probe for a universal bacterial rRNA gene (based on prior art primers deposited in the Buropean ribosomal RNA database), used in the method of the invention. The invention relates to an isolated nucleic acid (NI) comprising at least 20 but not more than 1500 consecutive nucleotides of the optineurin promoter appearing as ADB13890. Also included are the optineurin promoter operably linked to a heterologous nucleic acid, a nucleic acid capable of detecting a single nucleotide polymorphism (SNP) in the optineurin promoter, a host cell comprising the promoter operably linked to a heterologous sequence, diagnosing or prognosing glaucoma in a sample obtained from a cell or bodily fluid (comprising detecting a polymorphism Human, optineurin, ds. ophthalmological, single nucleotide polymorphism; SNP; glaucoma; progressive ocular hypertensive disorder; glaucoma related disorder; motif; repeat element; regulatory region. New nucleic acid sequences of the optineurin gene are useful to detect polymorphisms particularly single nucleotide polymorphisms in the optineurin promoter to diagnose, prognose and treat glaucoma and related sample with a first extendable primer. Binding of the nucleic acid probe Gaps Optineurin promoter motif, repeat element or regulatory region #457. ; Score 7.4; DB 1; Length 10; Pred. No. 2.8e+02; 0; Mismatches 1; Indels Sequence 10 BP; 1 A; 2 C; 6 G; 1 T; 0 U; 0 Other; Claim 11; SEQ ID NO 459; 159pp; English. ы В. Si 46.3%; 88.9%; 06-MAR-2002; 2002US-00091281. 06-MAR-2002; 2002US-00091281. ADE14348 standard; DNA; 12 29-JAN-2004 (first entry) Morissette J, 8; Conservative 2 GGCGGGCGG 10 (SIEE/) SI E. (RAYM/) RAYMOND V. (MORI/) MORISSETTE J. 1 GACGGCGG 9 WPI; 2003-864168/80. Query Match Best Local Similarity US2003190617-A1 Homo sapiens 09-OCT-2003 Raymond V, disorders. ADE14348; RESULT 545 Matches ADE14348 ð g

```
in a promoter region of the optineurin gene, associated with a glaucoma phenotype), detecting a SNP sequence variation in a sample containing DNA, detecting the presence of an optineurin promoter sequence variation in a sample containing DNA, determining the presence or increased disorder resulting in loss of visual field in a patient (or the severity or progression of glaucoma in a patient, comprising providing amplification reaction primers that direct amplification of a selected multiplication containing the variation within the optineurin promoter and amplifying the DNA) and detecting a polymorphism (comprising obtaining a sample containing human genomic DNA, providing a nucleic acid detecting a SNP located within an optineurin promoter, and capable of detecting a SNP located within an optineurin promoter, and prognose glaucoma and also to treat glaucoma related disorders. The present sequence is an optineurin promoter or
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The primer was synthesised using a 380A-DNA synthesiser along with another primer (AAQ22880). They were eluted from the column by 27 percent ag. ammonia and heated to 55 deg C overnight. The soln, was diluted, fed to OPC and the elute washed three times with dil. aq. ammonia, dH2O and TFA. The nucleotides were eluted with 20 percent acetonitrile to give pure oligonicleotides. DNAs were extracted from cultures of human Mycobacterium tuberculosis, chicken M. avium, etc. and amplified using the above primers. The PCR prod. frpm all was a 236 bp fragment with a different restriction fragment pattern from each species. The method can detect the presence and type of various acid-fast bacteria (Mycobacteria) in a sample specimen, specifically and rapidly with high sensitivity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Detection of Mycobacteria genus microbe - by amplifying mixed soln. contg. DNA primers contg. oligo-nucleotide parts, and DNA polymerase and
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                  A Score 7.2; DB 1; Length 12; Similarity 75.0%; Pred. No. 3.96+02; 9; Conservative 0; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Amplification; DNA polymerase; rapid; sensitive; ss.
                                                                                                                                                                                                                                                                                                                                                         Sequence 12 BP; 1 A; 7 C; 4 G; 0 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCR primer to detect Mycobacteria genus species.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 1; 8pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAQ22679 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        90JP-00142582,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             90JP-00142582
                                                                                                                                                                                                                                                                                                                       putative regulatory region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (IATR ) IATRON LABORATORIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-JUL-1992 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contg. DNA primers contg. aq. liq. sample specimen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CGGCGGCGCA 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 cececececa 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1992-092902/12.
                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JP04036199-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-MAY-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-MAY-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-FEB-1992.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAQ22679;
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 546
AAQ22679
      $$$$$$$$$$$$$$$$$$$$$$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ò
```

Sequence 10 BP; 2 A; 3 C; 4 G; 1 T; 0 U; 0 Other;

```
ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The sequence is that of a PCR primer used to isolate the TCI gene which encodes the TCI tumour marker protein, by palindromic PCR. The gene and its product may be used to detect tumours in blood, urine or sputum. Inhibitors of TCI are used to treat late stage cancers and for preventing tumour cell metastasis. See also AAQ90112-25. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New tumour marker TC1, corresp. DNA and monoclonal antibody - for detecting, preventing and treating tumours, esp. in breast, colon and
                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                        Tumour marker; invasive; metastatic; cancer; ss; palindromic PCR.
                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Antisense oligonucleotide 901, targeting adenosine Al receptor.
 DB 1; Length 10; 5. 3.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43.8%; Score 7; DB 1; Length 10; 100.0%; Pred. No. 3.46+02; ative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10 BP; 0 A; 5 C; 3 G; 2 T; 0 U; 0 Other;
       100.0%; Preu. ...
 Score 7; I
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                            (DAND ) DANA FARBER CANCER INST INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 8; 84pp; English.
                                                                                                                                       AAQ90120 standard; cDNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gastrointestinal tract cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV47401 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                             94WO-US012502
                                                                                                                                                                                                                                                                                                                                                                                      93US-00146488
43.8%;
                                                                                                                                                                                                                               PCR primer for the TCI gene.
                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-NOV-1998 (first entry)
Query Match 43.8
Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                     Chen LB, Bao S, Liu Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7; Conservative
                                                                                                                                                                                           (revised)
                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1995-178826/23.
                                                 7 GCGCCAT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                          3 GCGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CGGCGGG
                                                                                                                                                                                                                                                                                                                                                             31-OCT-1994;
                                                                                                                                                                                                                                                                                                                                                                                     29-OCT-1993;
                                                                                                                                                                                                                                                                                                           WO9511923-A1
                                                                                                                                                                                        25-MAR-2003
05-NOV-1995
                                                                                                                                                                                                                                                                                                                                    04-MAY-1995.
                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                AAQ90120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAV47401;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                              RESULT 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 548
                                                                                                                            AAQ90120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAV47401
ID AAV
XX
AC AAV
XX
DT 10-
XX
XX
XX
                                                                      셤
                                                                                                                                       ò
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ઠે
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            셤
```

```
allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                 Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV47391
    엄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ò
                                                                                                                                                                                                                                                                                                                                                                                               Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and used to construct antisense oligonucleotides containing a phosphorothicate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or prevent conditions associated with bronchoconstriction and/or lung allows.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                  Treating respiratory disease with antisense sequences directed against adenosine or bradyknin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease;

    .10
        //trag= a
        //trag= acontains phosphorothioate internucleotide linkages"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antisense oligonucleotide 880, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              43.8%; Score 7; DB 1; Length 10; 100.0%; Pred. No. 3.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Pred. ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  allergy, emphysema and cystic fibrosis
                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                             Claim 12; Page 8-24; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAV47380 standard; DNA; 10 BP.
                                                                                                                                                                                                                         96US-00757024.
                                                                                                                                                                                                 97WO-US022017.
                                                                                                                                                                                                                                              (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 100.
Matches 7; Conservative
                                                                                                                                                                                                                                                                                            WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 GGCGGGC 8
                                                                                 Key
modified_base
                                                           Ното варіеля
                                                                                                                                                    WO9823294-A1
                                                                                                                                                                                                  26-NOV-1997;
                                                                                                                                                                                                                         26-NOV-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-NOV-1998
                                                                                                                                                                           04-JUN-1998
                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                      Nyce JW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV47380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV47380
 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
```

```
Sequences AAV46501-V47446 are anti-sense oligonucleotides that target the human adenosine A1 receptor, the design of which required the secondary structure of this targets mRNA. The adenosine receptor mRNA secondary structure was both analysed and use to construct antisense oligonucleotides containing a phosphorothioate backbone. Once the antisense molecules are created they can be used to target their predetermined target, thus causing the gene product to decrease. The antisense oligonucleotides were targeted to specific mRNA regions containing either a junction between the intron and exon, or where they may overlap the initiation codon. The receptor is a member of the G-protein coupled family of cell surface receptors that have 7-transmembrane segments. These oligonucleotides can be used to treat or provent conditions associated with bronchoconstriction and/or lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Treating respiratory disease with antisense sequences directed against adenosine or bradykinin receptors - with localised delivery to the respiratory system, suitable for long term treatment of asthma, adult respiratory distress syndrome etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inflammation in humans or other animals e.g. asthma, pulmonary disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Secondary structure; mRNA; phosphorothioate backbone; G-protein; bronchoconstriction; lung inflammation; asthma; pulmonary disease; allergy; emphysema; cystic fibrosis; ss.
                                                                                                                               1. .10
/*tag= a
/note= "contains phosphorothioate internucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Antisense oligonucleotide 891, targeting adenosine Al receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        43.8%; Score 7; DB 1; Length 10; 100.0%; Pred. No. 3.4e+02; tive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10 BP; 1 A; 3 C; 5 G; 1 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         allergy, emphysema and cystic fibrosis
                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 12; Page 8-24; 47pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAV47391 standard; DNA; 10 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96US-00757024.
                                                                                                                                                                                                                                                                                                                                                                                                                                           97WO-US022017
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Query Match
Best Local Similarity 100.00
Best Local 7; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYEC-) UNIV EAST CAROLINA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-NOV-1998 (first entry)
                                                                                                                                                                                                                                  linkages"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-322464/28.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCGGGC 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GGCGGGC
                                                                                                                           modified base
                                                                                                                                                                                                                                                                                                                                                                                                                                        26-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-NOV-1996;
                                                                                                                                                                                                                                                                                                     WO9823294-A1
                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                        04-JUN-1998
Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAV47391;
```